

Iron will

Prof puts her endurance to the test.

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Are the kids alright?

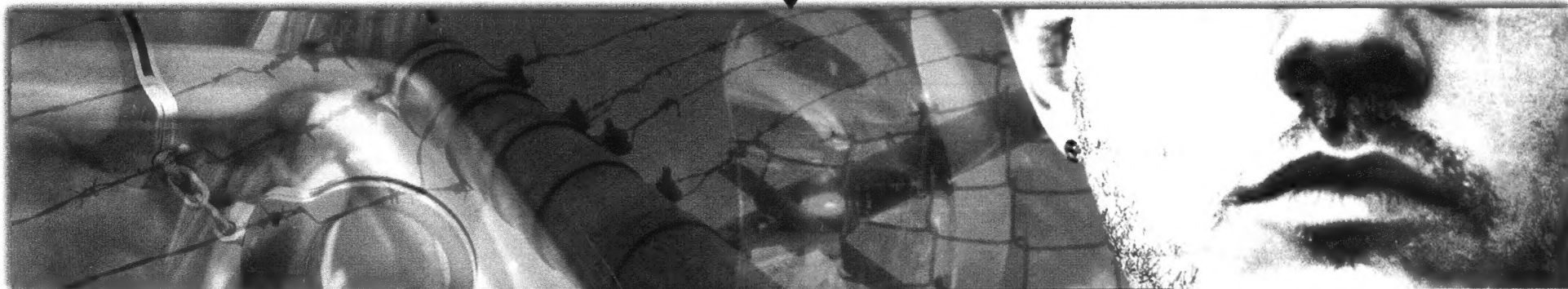
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UNIVERSITY OF ALBERTA

folio

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Young scientist becomes Rhodes Scholar

Jeeshan Chowdhury is the 23rd U of A student to attend Oxford University

By Caitlin Crawshaw

In his campus lab, budding scientist and space enthusiast Jeeshan Chowdhury shows off a plastic model of a Star Trek 'tricorder'.

The device, which scanned the human body to determine injuries and disease on the popular TV series, may not be science fiction for much longer. Chowdhury is a member of an interdisciplinary research team led by University of Alberta engineer Dr. Chris Backhouse and oncologist Dr. Linda Pilarski. They are presently developing lab-on-a-chip technology which may one day diagnose diseases and genetic conditions in mere seconds.

That he's involved in such a cutting-edge project at 22 years of age is an amazing accomplishment, but it's one of many highlights padding Chowdhury's student résumé. His most recent recognition is also one of the most exciting: acceptance to the prestigious Rhodes Scholarship program at Oxford University.

Next September, Chowdhury, a medical/PhD student, becomes the 23rd U of A student to attend the British university as a Rhodes Scholar.

"So many opportunities have now opened up, I can't even imagine all the things I'll be able to experience," said Chowdhury, noting that world leaders such as Bill Clinton and Jacques Chirac have visited Rhodes House.

"It's been so great to be at the U of A, because of the new energy that you can feel here. Just look at the lab we're in. We're in the newest field of nanotechnology, we're privileged to have such great funding. But it'll be great to go some-



Rhodes Scholar Jeeshan Chowdhury, an MD/PhD student at the U of A, holds a microfluidic chip developed at the lab of Dr. Chris Backhouse and Dr. Linda Pilarski. Chowdhury is helping to develop "lab-on-a-chip" technology, which utilizes the tiny chips to rapidly diagnose disease and genetic conditions.

where where there's a history and tradition, and to experience that," he added.

While Chowdhury isn't certain who he'll work with at Oxford, he believes the program will be a life-altering experience.

"I think it'll change who I am, hopefully for the better. I hope I'm the same person at the end. I hope I've had more opportunities to learn and to see the world. I hope I can come back to Canada

and to Alberta and be someone who can contribute to what we have here."

Chowdhury has plenty of time to plan his Oxford experience, though his life in Edmonton is a busy one. In addition to his duties as a student and researcher, Chowdhury is a member of the U of A rowing team and the Canadian Ski Patrol, and a director for the Canadian Millennium Scholarship Foundation.

"So many opportunities have now opened up, I can't even imagine all the things I'll be able to experience."

—Jeeshan Chowdhury

And while his life on Earth keeps him busy enough, Chowdhury's love of space has propelled him into some rather unusual experiences. He was a member of a student team that participated in a zero-gravity experiment this summer in France, and he once attended a NASA space camp in California.

In fact, space has been a lifelong fascination for the Star Trek fan. He recalls his kindergarten Halloween costume, a spacesuit his mother fashioned for him, and admits he's dreamt of becoming an astronaut.

"It's definitely one of those childhood dreams you keep close to your heart. And if the opportunity came up, I'd do it," he said.

In the meantime, Chowdhury is happily pursuing medicine – a field that has long intrigued him.

"Science is about learning and discovering for the sake of discovery, but also to advance humankind and help people. And medicine really personifies that." ■

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UNIVERSITY OF ALBERTA

Researcher fuels hydrogen technology

New research hopes to solve one of the problems plaguing hydrogen-powered vehicles

By Ryan Smith

Most junior high school students can tell that you a sponge cut into pieces will absorb water much faster than a whole one, due to the increased surface area. But now a chemistry professor at the University of Alberta is using this same principle on a nano-scale to develop a more efficient way to store hydrogen for use in vehicles.

Dr. Jonathan Veinot is in the process of patenting a way to prepare small pieces of metal that he hopes will be more efficient at storing hydrogen than any equipment currently available. He is backed by a grant from automotive giant Honda to research his idea.

Hydrogen-fuelled vehicles are more desirable because they release only heat and water, in contrast to petroleum-fuelled vehicles, which emit harmful greenhouse gases. But there are currently three main problems preventing the widespread use of hydrogen-fuelled vehicles, said Janet Macdonald, a PhD candidate working in Veinot's lab.

"The three main obstacles are the engineering of hydrogen fuel cells, the storing of hydrogen, and where and how we'll get the hydrogen," Macdonald said. Veinot's lab is working on the storage issue.

"Metals have reasonable hydrogen storage capabilities, but the speed of hydrogen

"The three main obstacles are the engineering of hydrogen fuel cells, the storing of hydrogen, and where and how we'll get the hydrogen."

— Janet Macdonald

uptake and release must be improved," Veinot said. "Very simply, we decided to 'cut up the sponge' by making nanoparticles."

"Interestingly, making things smaller makes them better for our chosen application, but it also makes them more challenging to work with," he added.

Early next year, Macdonald plans to go to Honda's research centre in Columbus, Ohio to investigate the characteristics of the nanomaterials created in Veinot's lab. Veinot is confident Macdonald will learn a great deal while she's there.

"No one has attempted to prepare the analogous nanomaterials that Janet is striving to make via a solution method," he said. "This project is far from easy given the extreme reactivity of the materials involved, and it will definitely be groundbreaking if the materials can be successfully prepared, investigated and understood."



PhD candidate Janet Macdonald is working to improve hydrogen storage.

Aside from improving hydrogen storage, Veinot hopes his research will lead to an improvement in the understanding of hydrogen storage mechanisms in metal

hydrides, in general, and will also possibly develop into "unique methods for preparing, characterizing and handling highly reactive nanomaterials," he said. ■

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UNIVERSITY OF ALBERTA,
EDMONTON, ALBERTA T6G 2H1

LEE ELLIOTT: Director,
Office of Public Affairs

RICHARD CAIRNEY: Editor

CAITLIN CRAWSHAW: Managing Editor

GEOFF MCMASTER: Assistant Editor

CONTRIBUTORS:

Beverly Betkowski, Richard Cairney,
Phoebe Dey, Caitlin Crawshaw, Geoff McMaster,
Ryan Smith

GRAPHIC DESIGN:

Marcey Andrews, Penny Snell

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Inquiries

Comments and letters should be directed to Richard Cairney, editor, 492-0439
richard.cairney@ualberta.ca

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U of A forms health sciences partnership with Capital Health, City of Edmonton

Agreement a first step to establishing unprecedented research centre

By Beverly Betkowski

The University of Alberta has signed an agreement with Capital Health and the City of Edmonton, forging a partnership for the transformation of Edmonton's health-sciences sector into a national and international leader.

The agreement paves the way for the establishment of iCARE (Integrated Centre for Care Advancement Through Research Edmonton), a health outcomes research centre. The initiative will apply U of A research to everyday services delivered by Capital Health for optimum healthcare.

It is the first such formal collaborative agreement ever signed by the three parties, and possibly the first of its kind in Canada.

"Our researchers, working collaboratively with their Capital Health colleagues, will help Canada shape and improve its healthcare system in ways that ensure patients get the best care possible...and the University of Alberta will be in the forefront of that effort," said Dr. Indira Samarasekera, president of the U of A.

The goal of iCARE is to "successfully translate gains in research into clinical practice and health delivery," she added. The agreement will aid world-class research, outstanding training in health programs, public health promotion and professional expertise and leadership, Samarasekera added.

The centre will be headed by Dr. Shoo Lee, a clinician-scientist recruited from the University of British Columbia, who is among the world's foremost experts in applying research to improve healthcare.



Jim Edwards, Chair of the U of A board of governors signs an innovative agreement with Neil Wilkinson, Chair of the Capital Health board, and Edmonton Mayor Stephen Mandel.

The internationally recognized neonatologist and health economist was instrumental in the creation of the Canadian Neonatal Network.

"Capital Health will be a unique national laboratory for studying the best ways to treat patients, and facilitating changes in practice," Dr. Lee said. "This will be the first centre of its kind where researchers, care providers and health administrators work together to ask questions about how to make services work better, and then apply the answers to real-world programs. Researchers have always been frustrated by the 'knowledge transfer gap.' We can close that gap for the first time in Edmonton, because of this new partnership."

iCARE will draw on the expertise of medical professionals and scientists from a wide range of U of A faculties to provide input on preventive issues such as proper building access for the disabled, and the design of long-term care facilities that help seniors avoid falls. And more importantly, iCARE will monitor and review the results of the research when it is applied to the healthcare system, something that hasn't been done in the past.

iCare's researchers will be funded by grants they apply for through such agen-

cies as the Canadian Institutes of Health Research.

"With the support of the province, we have a once-in-a-lifetime opportunity in this region to build a health system that's not just bigger and better, but really new," said Sheila Weatherill, Capital Health President and CEO.

"We face big challenges and we need to bring science into the way we manage the system. The payoff is that people in our region and Alberta are the first to benefit from ground-breaking approaches based on the best evidence."

Capital Health serves a total of 1.6 million people across central and northern Alberta, providing specialized services such as trauma and burn treatment, organ transplants and high-risk obstetrics.

The collaborative project will help build on the City of Edmonton's reputation as an innovative community, Mayor Stephen Mandel said.

"We have an opportunity that's unique in Canada: to make the health sector, already very strong, a strategic asset for the city and province. (iCARE) is the start of so many great things for our city." ■

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Youth crime and punishment

Edmonton's youth homicides have complicated causes and solutions

By Caitlin Crawshaw

November was a grisly month for Edmonton. The city's homicide rate rose to an all-time high following a rash of violent crimes perpetrated by young people.

Cameron Campbell, a teen from Buffalo Lake Métis Settlement, had come to Edmonton to visit his girlfriend but never made it home again. The 17-year-old was fatally stabbed, allegedly by another young man the same age at a house party Nov. 19.

That same weekend, 17-year-old Shane Rolston shared a similar fate at another house party in Sherwood Park, just east of Edmonton. A group of youths – unwelcome party crashers who'd been told to leave – is alleged to have returned to the scene and beaten Rolston to death with blunt objects, including baseball bats and ringette sticks. Five 18-year-old men have been charged with first-degree murder. One of the men, who turned 18 after Rolston's death, is being treated as a young offender.

Days later, 19-year-old Olivia Marie Talbot became the city's 34th homicide of the year. Her long-time friend Jared Eugene Baker, also 19, was subsequently charged with murdering the pregnant teen. Another young woman, 18-year-old Sara Easton, was killed this fall while walking home with friends after her birthday festivities on Oct. 22. A 21-year-old man in a black vehicle, who didn't know Easton, fired a shot from inside his car, killing her in what appeared to be a random attack.

These recent examples of youth crime have some asking why Edmonton has been affected by such violence, and how it can be prevented. While experts might not agree about whether these incidents represent a trend in youth crime, they do agree the causes of this violence are complicated and that better means of prevention could be implemented.

In recent weeks, Dr. Bill Pitt, a University of Alberta criminologist and former RCMP officer, has been quoted in numerous publications in regards to the issue of youth violence. At the heart of these violent crimes, argues Pitt, is a problem with the criminal justice system as a whole, which he says is failing to deter would-be criminals, and isn't adequately protecting the public.

"The criminal justice system is severely broken," said Pitt. "The major components of the criminal justice system are police, the courts and parole. All three do not work in any way resembling a cohesive system – so to call it a system is wrong to start with."

Pitt believes that organized crime is tying up the resources of the police force, handicapping community policing efforts, while judges are unwilling or unable to give appropriate sentences. What's more, convicted criminals aren't serving the sentences they're given, but often get early parole or time off due to good behaviour.

And due to the influence of organized crime at Canada's ports, particularly at Halifax, Toronto, Montreal and Vancouver, a large number of illegal firearms and drugs have been entering the country. "There was a time when you'd have a hard time getting a six-inch knife; now you can get automatic weapons, tailor-made stuff that's stolen from U.S. armories and shipped into Canada. It's frightening," Pitt said.

For Pitt, the justice system is sending the message to a 'criminogenic' population – young men between 18 and 25 who are detached from society and lack long-term goals – that "violence is a means to an end."

"It's not sending out any kind of message that if you break the law, there are



going to be strong penalties. In other words, if you're under 18, you're going to get away with murder."

Unafraid of the consequences, more young Canadians – most, but not all of them men – are resorting to violence to solve problems.

"It's happening in Victoria, it's happening in Inuvik, it's happening in Halifax, it's happening in Toronto – it's not just Edmonton. This youth violence, the willingness and the thin-skinnedness of young males particularly, and the resort to violence, is a fast-growing problem."

But Dr. Timothy Hartnagel, another U of A criminologist, cautions against looking at the recent examples outside of their historic context.

According to Statistics Canada data, homicides by young people in Canada continued to fall in 2004, and only 1.57 of every 100,000 youths between 12 and 17 were accused of murder last year. This is the lowest rate in more than three decades, and below the 10-year average of 2.08 per 100,000.

"It is true that Edmonton's rate of homicide is the highest in more than a decade," said Hartnagel. "But it's part of a somewhat more general trend among larger metropolitan areas."

Last year, 34 people were murdered in Edmonton, up from 22 in 2003, reported Statistics Canada. Between 1994 and 2003, an average of 23 people were murdered here each year. Now 35 people in Edmonton have been murdered in 2005,

placing the city's homicide rate at an all-time high.

"One of the big things people always want to know about is, it's gone up, so is this a trend? Thirty-four is too many – one is too many – but the problem is you're dealing with, relatively speaking, small numbers, and it's hard to say that we're in an ever-increasing spiral here of more violence or more homicide."

While it's hard to predict if the overall murder rate and youth homicide rate will increase, Hartnagel figures that weak penalties for offenders is to blame for youth crime, including homicide. After all, the argument that severe punishments will deter criminals is flawed.

"That assumes people are rational and logical, and that they're going around calculating where and when they're going to commit crimes or not commit crimes."

The fact is, homicide is not perpetrated by people with their wits about them, says Hartnagel. "It's not like someone sits down and calculates ahead of time, 'Now, should I kill this person?'"

In the vast majority of cases, the killer is an acquaintance, spouse or partner of the victim, and the violence emerges from a conflict. What's more, research shows that in 55 per cent of homicides, the victim and or the accused had consumed alcohol or drugs, and in 73 per cent of the cases, the accused had consumed alcohol or drugs. Furthermore, youths are even less likely to be concerned with long-term consequences before committing a crime, he adds.

"It's happening in Victoria, it's happening in Inuvik, it's happening in Halifax, it's happening in Toronto – it's not just Edmonton. This youth violence, the willingness and the thin-skinnedness of young males particularly, and the resort to violence, is a fast-growing problem."

– Dr. Bill Pitt

A greater deterrence than the severity of punishment, Hartnagel says, is the certainty of getting caught – something that's much more difficult to control.

Dr. Lori Harach, a professor in the Department of Human Ecology at the U of A, studies the relationship between parents and adolescents. In her view, parenting techniques can play a role in preventing youth from engaging in unhealthy and antisocial behaviours.

Parents who model healthy ways of solving conflicts, and who keep the lines of communication open with their teens, are more likely to produce well-adjusted young adults. This authoritative style of parenting is associated with positive outcomes more often than permissive parenting – where rules are few and not enforced – or authoritarian parenting, where many rules and penalties are placed on teens and few opportunities are given for personal growth.

There are many factors potentially playing into the youth homicides the city has seen, Harach says. But one key element could be how today's parents compare to their own parents.

"I don't think it's been identified as a trend, but I think our society might be in a place where parents are more successful than their parents' generation. They're making more money, and they want for their kids what they never had."

Today's parents don't necessarily expect their kids to take on part-time jobs as teens. More kids have money given to them that they aren't accountable for, and are given fewer household responsibilities. And today's adults are also working longer hours than their own parents did.

"It allows for a lot more free time for the adolescent, and time without supervision, so there's a lot more opportunity for things to go bad. It's harder and harder for parents to know adolescents, and to know their friends, to know what they do with their free time. If you see them for two hours a day, how much information can you really get?"

While Harach thinks parenting styles could be contributing to youth crime, she's unsure whether programs offering parenting classes would make much of a difference.

But for Hartnagel, early intervention programs for at-risk youths are by far the best way to prevent youths from becoming violent offenders. By identifying children with certain risk factors, like aggressive tendencies, their teachers and caregivers can be trained to counter undesirable behaviours. North American programs that target risk factors have been quite successful, he added.

"As a general proposition, I would certainly argue that it's better to nip things in the bud than try to deal with things in the past, so the extent to which we can identify risk factors for later serious criminality and intervene effectively to do something about it before it emerges, the better off we're going to be." ■

Permafrost expert named top scientist by Earthwatch

Arctic scientist also known for having one of the worst jobs in science

By Geoff McMaster

According to *Popular Science*, Dr. Peter Kershaw has one of the worst jobs in science. So bad, in fact, that Rick Mercer's producers wanted to take a closer look for the comedian's weekly CBC television show, Rick Mercer's Report.

There is no doubt Kershaw's research involves hardship—from carnivorous deer flies called "bull dogs" that claim their pound of flesh to hungry polar bears to frostbite—but it also brings some highly prestigious recognition. In November, Kershaw, a University of Alberta professor of earth and atmospheric sciences who studies how Arctic permafrost is affected by climate change, was named Scientist of the Year by the Earthwatch Institute, an organization supporting field research and sustainable conservation around the world.

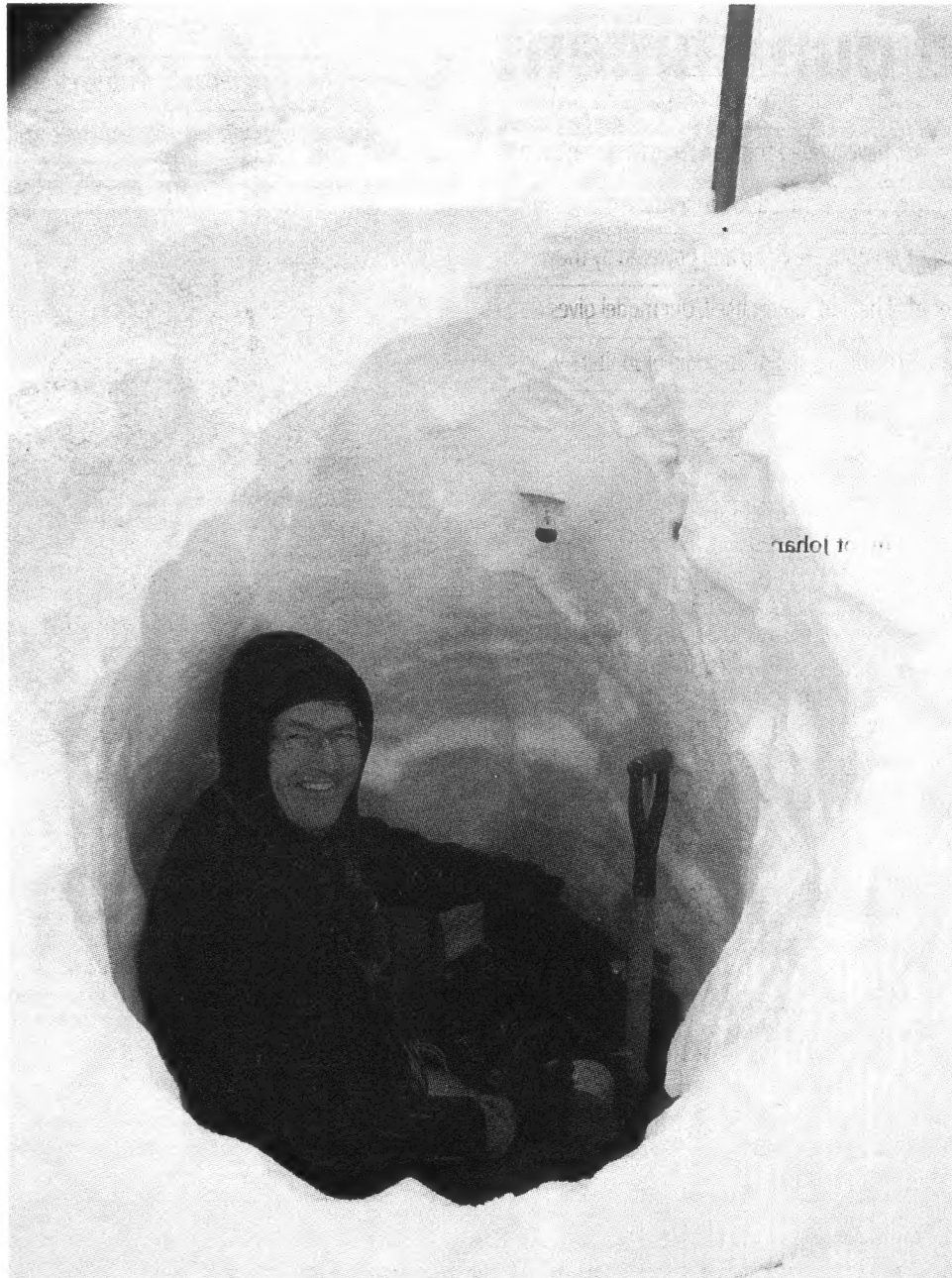
"Peter Kershaw is the kind of scientist who makes their subject come alive," said Dr. Marie Studer, chief science officer at Earthwatch. "He is always eager to share every nuance of his research with Earthwatch volunteers so they can become better global citizens. His research on the Arctic environment provides important data to understand the implications of climate change for natural and human systems."

Studer said Kershaw is being honoured not only for his research, which is impressive enough, but for his contribution to public education, including giving numerous talks and leading teams of volunteers on field expeditions in places such as Churchill, Manitoba and the Mackenzie Mountains in the Northwest Territories.

Kershaw's research project, called Climate Change at the Arctic's Edge, is partly funded by Earthwatch. The non-profit organization offers members of the public opportunities to work alongside leading field scientists and researchers.

"People pay to go on these 'vacations' where they're working 16 hours a day," Kershaw said, and they face everything hardcore researchers deal with every day.

These extreme vacations caught the attention of *Popular Science*, said Kershaw. Volunteers e-mailed a reporter at *Popular*



Dr. Peter Kershaw at work.

Science, pointing out the more trying aspects of Kershaw's job. The resulting article was a "somewhat embellished piece," said Kershaw, that played up the challenges that go with the territory, like seeing through eyes swollen shut by the inescapable onslaught of flies and mosquitos.

"And of course you can't assume in Churchill that you can go out the door and not run nose to nose with a polar bear, at any time of year," he added. "If you go jogging, you should take one of those little starter pistols with those cracker shells that make a noise. Hopefully if a bear decides

"Peter Kershaw is the kind of scientist who makes their subject come alive."

— Dr. Marie Studer

you look yummy, that'll deter him."

Kershaw is primarily interested in how vast stores of carbon are affected by the melting permafrost, which he's shown is shrinking at the rate of about one per cent per year.

This is an alarming statistic, keeping in mind that half of Canada and a quarter of the planet is underlain by permafrost. It's one of the biggest carbon sinks on Earth, sequestering large amounts of carbon in peatlands. "The concern is, if the permafrost melts, you could potentially put a lot of that carbon, as it decomposes, into the atmosphere."

"It's all related — as warming progresses because of greenhouse gases, you start melting the permafrost, which allows even more carbon to flash through the atmosphere, so it's an amplified effect."

And there are other implications of this melting, he said, affecting everything from pipelines to hydroelectric dams to transport corridors, not to mention the impact on northern ecological systems.

As for Mercer, it turns out Kershaw couldn't be in Churchill when the comedian planned to be there, but he's hoping producers at the Report call back, this time getting the "true story" on the world's worst job.

"If they talk to my colleagues, who deal with this stuff all of the time, I'm sure they'll pooh-pooh it."

Other funding sources for Kershaw's research include the Natural Sciences and Research Council of Canada, Imperial Oil, the Manitoba Climate Action Fund, the Canadian Circumpolar Institute, Circumpolar/Boreal Alberta, the Northern Scientific Training Programme, the Churchill Northern Studies Centre and the Northern Research Fund. ■

Home ownership rates dropping for immigrants: study

Decline attributed to labour market, possible discrimination

By Phoebe Dey

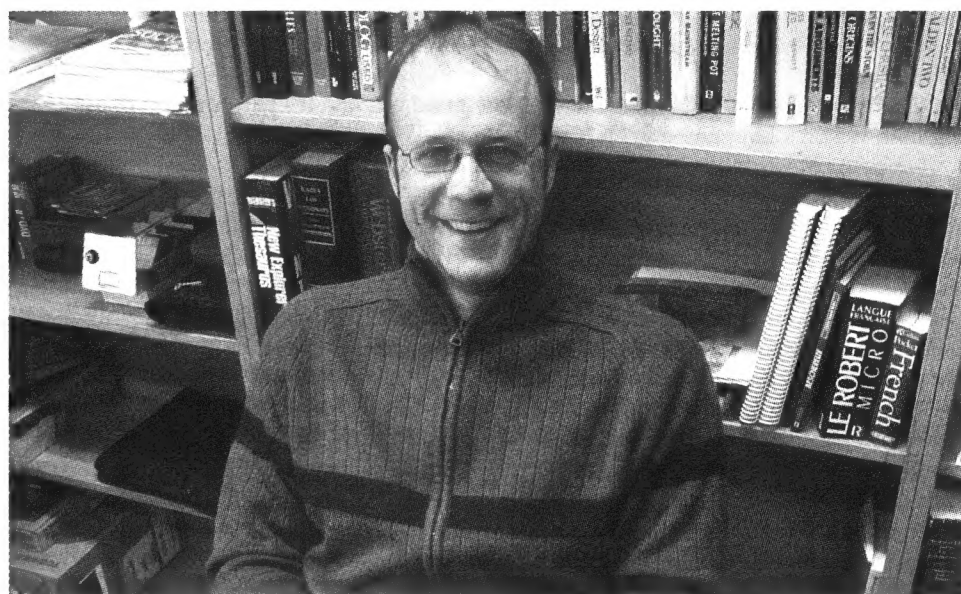
Immigrants have lost their once-large homeownership advantage over their Canadian-born counterparts, says a University of Alberta researcher.

Dr. Michael Haan, a professor in the U of A Department of Sociology, found that Chinese and white immigrants in both Canada and the United States have the highest homeownership rates of all groups, at times even exceeding comparably-positioned, native-born households. Much of this advantage, however, stems from differences that emerge shortly after their arrival to Canada.

Haan compared homeownership in Montreal, Toronto and Vancouver between immigrant and Canadian-born families. In 1981, proportionally more immigrant families of working age — 25 to 54 — owned their homes in these cities, surpassing the rates of Canadian-born families of the same age group.

But by 2001, although the immigrant advantage still existed in Vancouver (64 per cent versus 55 per cent), it had disappeared in both Montreal and Toronto.

Immigrant homeownership rates have dropped in the last few years, whereas rates for the Canadian-born have done the opposite. One cause for the decline is diminishing labour market fortunes for immigrants, Haan said. Although he can't be certain from the census data, he



Sociologist Dr. Michael Haan has found that immigrants are losing their homeownership advantage.

also suggests discrimination — both subtle and overt — as one other possible reason. Finally, other studies have shown that the median wealth of immigrants has dropped 25 per cent in recent years, potentially further explaining the decline.

This research appears in the current issue of the journal, *Urban Studies*.

In a follow-up study, Haan examined homeownership attainment rates (the rate at which group members buy homes over time) by skin colour. He compared the

homeownership levels of black, Chinese, Filipino, white and South Asian immigrants between 1971 and 2001 in Canada and the United States. For the most part, he found greater similarities than differences in attainment rates between the two countries.

Chinese and white immigrants from both Canada and the U.S. have the highest ownership rates of all groups, while black immigrants tend to have the lowest ownership rates. Filipinos and South Asians are

situated between these extremes.

The big finding, however, is that many of the differences can be linked to early attainment patterns, and that increases in homeownership propensities between groups over time is fairly consistent.

"The first few years seem to be important. A lot of Chinese immigrants come to Canada and the U.S., for example, with wealth," said Haan. "Clearly that helps. I suspect, however, that there is more to the immigrant homeownership story than just economics."

Overall, the rate at which homes are bought is similar between groups, but slowing over time in both countries. This illustrates that change in the skin colour of immigrants is not a major reason for falling immigrant homeownership rates in either country, said Haan, considering that arrival cohorts of all immigrant groups, including whites, have slowed their pace over time.

Haan would like to take his research even further by examining more closely what happens in the first five years of immigrants' lives in their new country. "I would like to see what shapes initial differentiation by looking at things like discrimination, credit barriers, wealth, ability to find suitable housing and other factors," he said. "I think those first five years are both critical and complex." ■

Computer model helps explain Jupiter's cloud bands

Dr. Moritz Heimpel created model with international research team

By Phoebe Dey

Look closely at a giant planet like Jupiter and you can actually see a powerful system of winds at work. University of Alberta physicist Dr. Moritz Heimpel and his research team have created a new 3-D computer model to describe how the winds that form the distinctive bands on that planet's atmosphere are powered by forces from within the planet. The research is published in the current issue of *Nature*.

Jupiter's winds are different from those on Earth – they continually circle the planet, and have changed very little in the 300 years that scientists have studied them. In Jupiter's equatorial region, the massive east-west winds reach speeds upwards of 540 kilometres per hour, twice as fast as winds generated by strong hurricanes on Earth. At higher latitudes, the wind pattern switches to alternating jets that race around the planet.

Heimpel has always been interested in planetary dynamics, especially in the Earth's core, and how it generates a magnetic field. Although we cannot directly see what is going on in the Earth's core, we can look to the big planets like Jupiter and Saturn where a telescope will reveal fluid dynamics in the atmosphere.

"We have images from space missions that show fluid motion in incredible detail," said Heimpel. "The giant planets provide a natural laboratory for the fluid dynamics of other planetary bodies."

Heimpel's work offers clues as to why the winds are so constant and what generates them.

On a small scale, an example of fluid dynamics takes place in a creek with little

"The issue of how deep these fast winds penetrate has always been an unresolved question. Some groups have argued that the winds are shallow and powered by the sun, and others have maintained that the winds are deep and powered by the internal heat of Jupiter itself. Our model gives strong evidence of a deep origin of Jupiter's winds."

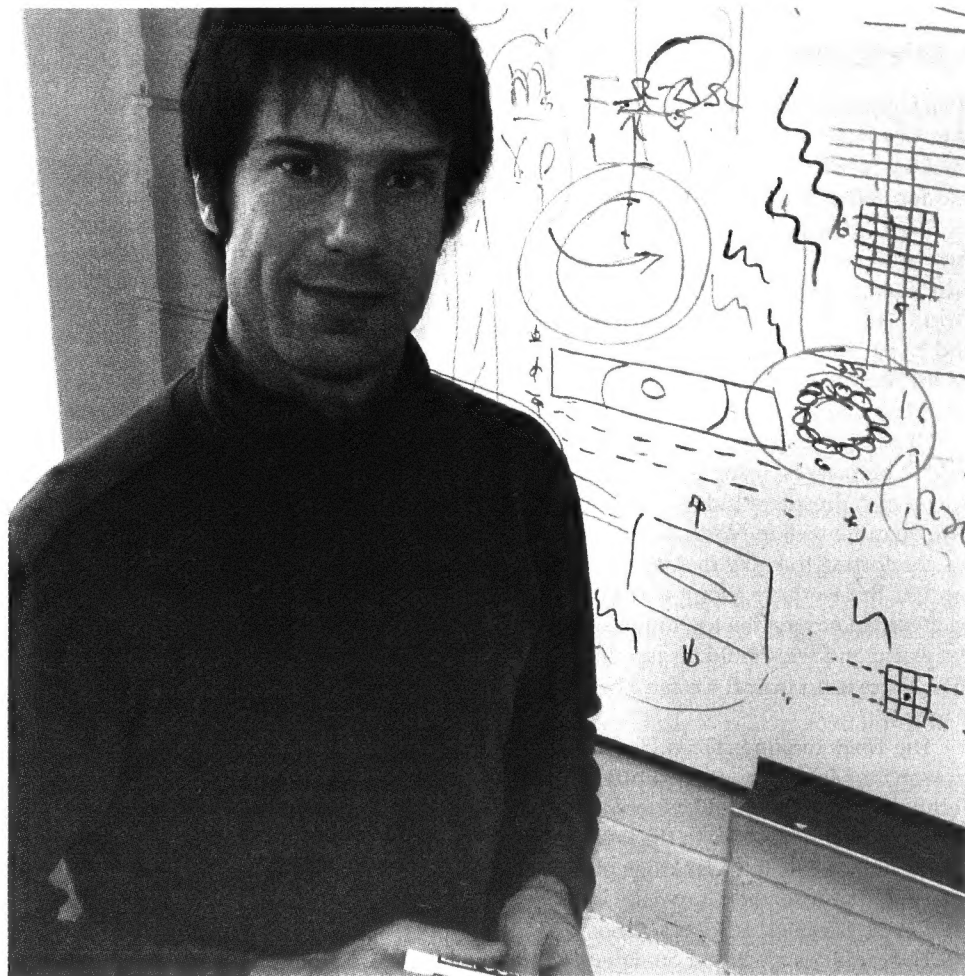
– Dr. Moritz Heimpel

whirls of current. The research team—made up of Johannes Wicht from the Max Planck Institute for Solar System Research in Germany and Jonathan Aurnou at the University of California, Los Angeles—had to scale that small example up to planetary size. The key, said Heimpel, was using a good computer system and a better code as well as a scaling theory for planetary turbulence.

The model is the first to show that high latitude jet streams come from deep convection.

"The issue of how deep these fast winds penetrate has always been an unresolved question," said Heimpel. "Some groups have argued that the winds are shallow and powered by the sun, and others have maintained that the winds are deep and powered by the internal heat of Jupiter itself. Our model gives strong evidence of a deep origin of Jupiter's winds."

The planet's radius is more than 11



Dr. Moritz Heimpel has created a 3-D computer model to explain how the winds that form the bands on Jupiter's surface are powered by forces within the planet.

times the radius of Earth and a tremendous amount of heat comes from the interior, which may help explain why these winds have been so stable for centuries.

Heimpel hopes the research may start to provide answers about the flow in the liquid outer core of the Earth, as well as for zonal currents in the Earth's oceans. ■

Idea of citizenship praised in U of A vision statement

President holds town hall meetings to discuss university's future

By Geoff McMaster

If there is one thing that stands out in President Indira Samarasekera's vision for the University of Alberta, it's the notion of fostering citizenship.

That was the consensus at a Town Hall meeting held on Nov. 17, the first of two such gatherings for members of the university community to comment on the first draft of the president's Dare to Discover blueprint document for the 21st century.

"There are a number of transformative ideas here, particularly the idea of citizenship," said Dr. Lois Gander of the Faculty of Extension. Gander was one of about 45 people who attended the first campus meeting. "This is what will make us a great university."

Samarasekera opened the session with her vision "to inspire great achievements through learning, discovery and citizenship in a community committed to building one of the world's great universities by nurturing the human spirit and contributing to the public good."

She explained that at its core is the "all-encompassing" embrace of communal responsibility, which means everyone in the university community has "an obligation to contribute" to the public good, and to reach out across disciplines to take on the challenges of our day.

Dare to Discover, she said, emphasizes what the U of A community has to do to become a great university, on a shared sense of values. Outlining a few specific goals, she said the university needs to attract more high-quality students from across Canada and around the world and needs to send more of its own students abroad to study. It also needs to increase its endowment fund – something all great universities have, she said – which would not be encumbered by the restrictions of provincial operating grants.



President Indira Samarasekera at the second Town Hall meeting on Nov. 23.

At both meetings, those who turned out said they appreciated the president's open, consultative approach to drafting her vision. "It's 44 years that I've been on this campus, and this is the first time a president has opened up in this manner – it's unprecedented," said one faculty member.

Another faculty member, however, worried that the vision and its mission statement were "highly ambitious," and would lay yet another burden on over-

taxed professors who lack adequate resources.

"There is no money even for a marking assistant, so things like this worry me considerably," she said. "Where are we going to find the resources for this?"

Samarasekera responded that "we have to set our sights high, otherwise we don't get the resources." She also said there would be a process to look at reallocating funds if necessary.

At a second meeting held on Nov. 23, staff, students and faculty touched on a number of topics. For one Caribbean-born participant, the fact that there are few black men at the university is problematic. "That's one of the concerns of the community, and one of the concerns I hope you'll address."

Samarasekera agreed that this is a problem not unique to the U of A, as fewer young men, regardless of race, are attending universities across Canada.

"I think we need to look more seriously about how we can be more open and inclusive so we've got a representation from all of our communities, particularly across the gender divide," she said.

One professor in the Department of English mentioned the decline in the quality of writing skills of university students. While a Senate study is examining the undergraduate learning experience, and is evaluating student skills and making recommendations, there are limits to how much the U of A can change this due to inadequate funding, said Samarasekera.

"Part of the reason why writing has deteriorated is the large first and second-year English classes. In many cases essays have been dispensed with because of a lack of faculty to mark them," she said. "This is the product of the serious under-funding of public universities."

The draft document will be presented to the board of governors at its December retreat, and then once again to the general university community next term. The final document will be received for approval by the end of the 2005-2006 academic year. Members of the university community are encouraged to submit their comments to Daretodiscover@ualberta.ca. A copy of the vision can be found at www.president.ualberta.ca/daretodiscover.cfm. ■

International rankings place U of A among North America's best

But president hopes U of A community will aspire to be among the world's best

By Richard Cairney

The University of Alberta has placed well in two international university rankings, cracking North America's top 50 in one and top 100 in another.

The U of A placed 47th among North American universities in The Times Higher Education Supplement's second annual World University Rankings, and 62 in Latin and North America (and fifth in Canada) on the Shanghai Jiao Tong University's Academic Ranking of World Universities.

"It's interesting that we ranked similarly in both cases, using different metrics," said U of A President Indira Samarasekera. "We do quite well in North America and it's comforting to know that we are in the top 100. But we have a long way to go to be regarded among the top universities in the world and we should be aspiring to that. There is no reason we can't be in that league."

The *Times* rankings listed Harvard University, Massachusetts Institute of Technology and Stanford University as the top three universities in the world. The Shanghai Jiao Tong rankings place Harvard, Stanford and University of California, Berkeley as the top three.

The rankings are based on a number of criteria, including faculty-to-student ratios, the number of citations for academic papers per faculty member, an institution's international orientation (number of international faculty and students), Nobel-Prize and Fields Medal recipients and employer opinion of alumni.

Samarasekera says there are flaws with the criteria. Shanghai Jiao Tong rankings focus on papers published in the journals *Science* and *Nature* but don't regard academic papers in social sciences and the humanities, for example.

"We do quite well in North America and it's comforting to know that we are in the top 100. But we have a long way to go to be regarded among the top universities in the world and we should be aspiring to that. There is no reason we can't be in that league."

— President Indira Samarasekera

But the fact remains that the universities regarded as the world's best do end up on top of the lists and, like it or not, the U of A's reputation is affected by the rankings.

"While they aren't entirely objective, there are some measures we have to pay attention to and improve upon," Samarasekera said. "We need to do better in publications such as *Science* and *Nature*, and in numbers of citations, while we continue to ensure we find ways to report our successes in the arts as a very separate metric."

Placing well in such rankings increases the university's ability to recruit the best faculty and researchers.

"The best professors will clearly have a profound influence on our undergraduate students. If the U of A is able to attract the top people in various fields it will have some influence on the intellectual climate and the teaching and research climate," she said.

"Education today is a global business, and both our graduate students and international students will determine where they go partly by these rankings. You can't dismiss them." ■



President Indira Samarasekera feels the U of A could rank among the top universities in the world, not just the best on the continent.

Partnership produces fastest supercomputer communication

Graduate student helps international team snag supercomputing prize

By Ryan Smith

A University of Alberta computing science PhD student has helped an IBM team claim a top prize in the High Performance Computing Challenge held at the Supercomputing 2005 Conference in Seattle in late November.

Christopher Kit Barton and the international IBM team he was a part of developed a compiler that delivers the fastest compiler-generated processor and memory communication in an IBM supercomputer. The compiler runs at 16.7 Giga updates per second to memory and utilizes 131,072 parallel threads of computation in the IBM Blue Gene/L machine, the most ever used in a computation.

"Supercomputers like this are used to dealing with huge problems, such as weather simulations, nuclear simulations, and aerodynamic simulations," Barton said.

The compiler is designed for the Unified Parallel C (UPC) programming language. Currently, the most common and fastest parallel programs operate with the Message Passing Interface (MPI) programming language, but the MPI language isn't as "elegant" as UPC, Barton said.

"People claim that UPC is easier to program, and we used it to create a short and concise code with excellent productivity and performance - that's why we won," he added.

The IBM Team that Barton contributed to won the "Class 2: Most Productivity" part of the competition, which is one of



PhD student Christopher Kit Barton was part of a team that snagged a top prize at the Supercomputing 2005 conference in Seattle last month.

the premiere high-performance computing competitions in the world. The improvements to the compiler Barton developed for the processor are part of the software infrastructure he is building for his PhD thesis.

"Kit Barton's work is a prime example of collaborative technology research tak-

ing place in Alberta," said Rolf Sherlock, Program Director, IBM Alberta Centre for Advanced Studies. "By helping to foster relationships between the private and public sector, we hope to further propel Alberta researchers onto a world stage."

Barton joined the competition through

"Kit Barton's work is a prime example of collaborative technology research taking place in Alberta."

— Rolf Sherlock

his work with the Centre for Advanced Studies at the IBM Toronto Laboratory, where he spent this past summer thanks to a collaborative research program partnership between the U of A and IBM.

Coinciding with Barton's achievement, the IBM Alberta Centre for Advanced Studies (CAS Alberta) held its first board meeting today on campus and announced its intent to focus research projects in the areas of machine intelligence, nanotechnology and biological simulation.

Announced in January, CAS Alberta is the result of a \$1.2-million technology and innovation investment by the Government of Alberta, IBM and the University of Alberta. The centre is dedicated to promoting collaborative technology research between IBM and post-secondary institutions in the province. ■

Drivers asked to hang up cellphones

Student coalition urges Alberta drivers and companies to limit or ban the use of cellphones in vehicles

By Beverly Betkowski

Lynda McPhee can't understand why people try to drive while making phone calls.

"What cellphone call is worth a life? Driving is a very complete activity and you need your full attention - otherwise, you're driving impaired."

That was the simple message delivered by McPhee and five fellow graduate students at the University of Alberta late November. During a press conference on Nov. 24, the students unveiled a generic cellphone policy they hope will be adopted by companies to keep employees safe on the road.

The result of a project developed by McPhee and her classmates for a course on injury control issues, the Coalition for Cell Phone-Free Driving encourages Alberta's drivers and companies to limit or ban the use of cellphones in vehicles. To date, seven prominent corporations have signed on with a commitment to cellphone-free driving, including Halliburton, Schlumberger, Sterling Crane and Holes Greenhouses and Gardens.

McPhee, a masters student in the Centre for Health Promotion Studies, hopes to see more businesses join as awareness of the coalition and the importance of limiting cellphone use while driving grows. Cellphone users, whether using hand-held or hands-free models, are four times more likely to be in an accident than non-users, McPhee said. As well, driver distraction, which includes cellphone use, is responsible for 25 to 30 per cent of the collisions that injure 500 and kill six Albertans every week.

Annette Wolfer became horribly aware of that fact in October of 2004 when Murray Wolfer, her husband of 16 years,



Lynda McPhee holds a cellphone and a ribbon to raise awareness about the importance of hanging up while behind the wheel.

was killed while driving and talking on a cellphone. An oilfield worker, Murray "insisted he had to talk on the phone (while driving)...never did I think it would come to this," Wolfer said. Their two children, one an adopted daughter from Romania, are left without a father. And Murray won't see his son graduate from high school this year. Worse, Wolfer added, is that "I still see many of my friends driving while talking on the cellphone. What's it going to take?"

The coalition's policy outlines steps that ban cellphone use while driving, as

well as directing messages to voice mail and parking safely before answering calls. It also recommends an escalating disciplinary approach in which two warnings would be given to employees who ignore the rules, followed by job termination.

Russ Brown of Sterling Crane says his corporation is a firm believer in such a policy. The company has 600 employees and many of them spend "countless hours" on the road.

"We recognize this is where our people are most at risk." A cellphone policy was implemented by the company in 2001,

"What cellphone call is worth a life? Driving is a very complete activity and you need your full attention - otherwise, you're driving impaired."

— Lynda McPhee

but employees and other drivers are still at risk, Brown admitted. "By joining this coalition we will be helping move towards a culture that doesn't accept cellphone use while driving, just as with impaired driving or seatbelt use."

Besides saving lives, it also makes sense legally for companies to control cellphone use, said Tracey Bailey, executive director of the U of A Health Law Institute.

"Employers in Alberta have a duty to employees to provide a safe work environment," Bailey said, noting that legally, employers could be on the hook for damages in accidents. "A policy such as this would show that employers take this duty very seriously. It makes good business sense to get on board."

As well, many countries have already banned cellphone use while driving. Newfoundland is the only province to have done so in Canada, Bailey said.

The hope, said McPhee, is that more companies will commit to a policy and that eventually, cellphone use while driving will be controlled by provincial legislation. The Coalition for Cell Phone-Free Driving will be taken over by the U of A Alberta Centre for Injury Control and Research after the students move on with their studies, McPhee said.

For more information on the Coalition for Cell Phone-Free Driving and its policy, call 492-6019. ■

Two U of A fiction writers vie for international literary prize

Thomas Wharton and Greg Hollingshead are among 11 Canadians nominated for the Impac Dublin Literary Award

By Geoff McMaster

Writers Thomas Wharton and Greg Hollingshead have been nominated for the Impac Dublin Literary Award, an international prize worth \$140,000.

Though the initial list of nominations from around the world includes 132 books, Wharton, who teaches creative writing in the University of Alberta's Department of English, says it still feels good to be recognized. His book, *Logogryph*, and Hollingshead's *Bedlam*, are among 11 Canadian books on the list, the most ever.

"It's pretty great, there's no doubt about it," said Wharton. "It's a long, long list, but when you hear about how many books are published every year it's still pretty great to be on that list."

"I remember a few years ago people used to joke and call it the 'no-impac' award because it didn't do much for sales, but I think it's become more well-known since then."

Seven Canadian books were nominated in 1998 and six in 2002. Alistair McLeod won for *No Great Mischief* in 2001. The list of nominations for the award, open to novels in English or in English translation, was announced by Lord Mayor of Dublin, Catherine Byrne on Nov. 22.

"It's the first time I've had any kind of international notice, so that's pretty exciting," said Hollingshead, a professor emeritus of English who won the Governor General's Award in 1995 for *The Roaring Girl*. "Once I found out it was the Edmonton Public Library that nominated me, I was strangely moved...and it's nice that Tom, who took over my job, is also nominated."

Libraries from 124 cities put forward

"It's pretty great, there's no doubt about it; it's a long, long list, but when you hear about how many books are published every year it's still pretty great to be on that list."

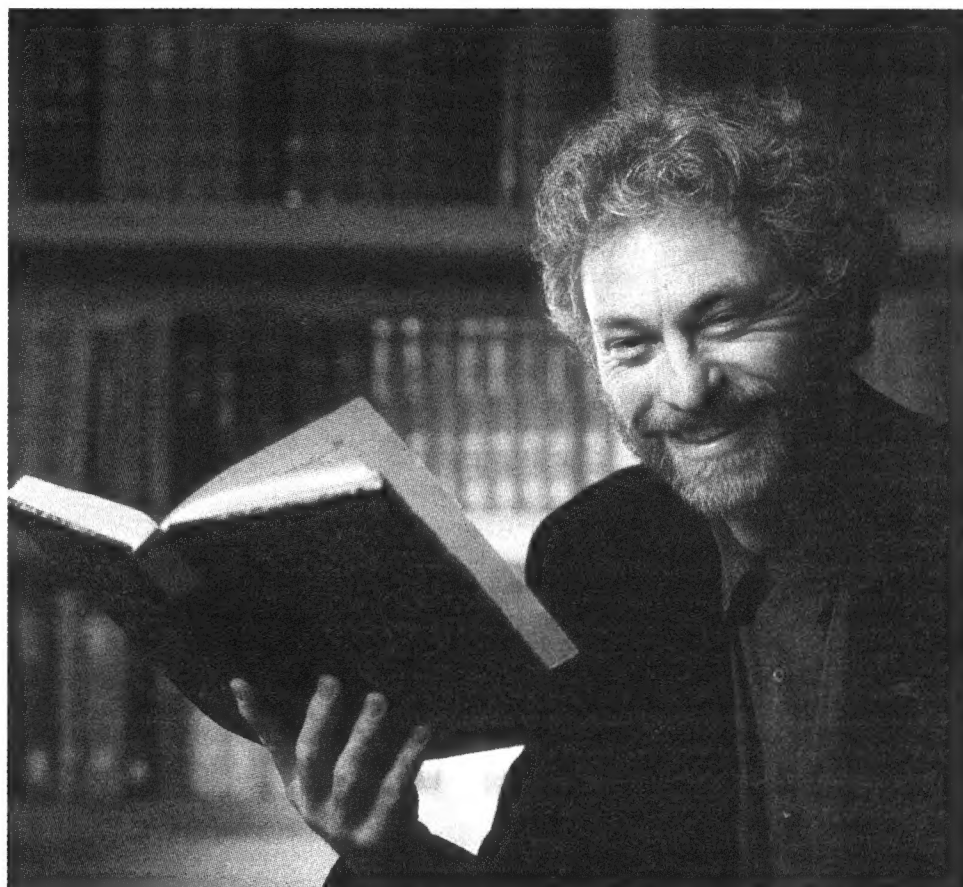
— Thomas Wharton

titles for the award, which are then read by a jury whose members will read all 132 books on the list. Other Canadian titles include:

- Miriam Toews' *A Complicated Kindness*
- Michael Winter's *The Big Why*
- Robert Hough's *The Stowaway*
- Trevor Cole's *Norman Bray in the Performance of His Life*
- Joel Hynes' *Down to the Dirt*
- Beth Powning's *The Hatbox Letters*
- Russell Smith's *Muriella Pent*
- Wayson Choy's *All that Matters*
- Richard Wright's *Adultery*

Wharton describes *Logogryph* as "not really a novel," but rather a "collection of short fiction," the title referring to a particular kind of riddle. "But I decided to turn it into a word for a mythological creature of my own invention, which represents the mystery that's in books, the mystery of reading, and how when you read a book you enter a different world."

The frame story, he says, is about a boy growing up in Jasper who is given a suitcase of old books, which stimulates a fascination with reading. He says the book is largely about the process, or what he likes to call the "alchemy" of reading.



Greg Hollingshead, a professor emeritus of English who won the Governor General's Award in 1995 for *The Roaring Girl*, is now nominated for an international literary award.

Bedlam is the story of three characters in eighteenth-century London during the aftermath of the French Revolution. It is partly based on the true story of James Tilly Matthews, an inmate of Bethlem Hospital, a home for the insane, at Moorfields in London.

"While exercising some fictional licence, I am doing my best to be faithful to the characters, their voices, their experiences and the times," Hollingshead said.

The short list for the Impac Dublin Award will be announced April 5, and the winner will be named June 14. ■

Iron woman finds triumph in keeping it slow and steady

With dogged determination, Kim Raine has proven herself an iron-clad triathlete

By Geoff McMaster

It's hard to believe that less than two years ago Kim Raine couldn't make it across a 50-metre swimming pool. In her first triathlon, she hung onto a buoy for dear life – and that was in the shallow Hawrelak Park pond.

Just 20 months later, however, the director of the Centre for Health Promotion Studies completed her first Canadian Iron Man event, one of the most gruelling athletic competitions on the planet.

Her time? Well that doesn't really matter, she says. It was always about crossing the finish line: "I'm not built for speed, but I can last a long time." And that is one of the biggest understatements you will ever hear.

Raine, 44, didn't start running until she moved to Edmonton in 1997. She'd already decided to attempt a marathon, just to see what it was like. But then she joined a largely social, Saturday-morning running group who call themselves the "Mighty Tough Women."

"We just like to run and talk; we could probably run faster if we didn't talk so much," says Raine. "It's a very social thing, and once a year we take a weekend to go away to run a marathon together – it's sort of like a girls' weekend with a marathon thrown in."

In 1997/98 she ran the Vancouver and Edmonton marathons, and then qualified for Boston (which she's now done twice and where she logged her personal best of 3:31). "It was all because of the connection

"The first time I swam 300 metres without stopping, my coach went to the other end of the pool and gave me a high five – this was a major accomplishment."

– Kim Raine

I made with these women," she says. "I was in a brand new city and this was my connection to Edmonton."

Gradually she began contemplating the triathlon. But the problem was she didn't know how to swim. She took lessons at the 50-metre Coronation Pool in January 2004, but at first "could not get from one end of the pool to the other." She eventually crossed that hurdle, however, stopping after every 50 metres to rest.

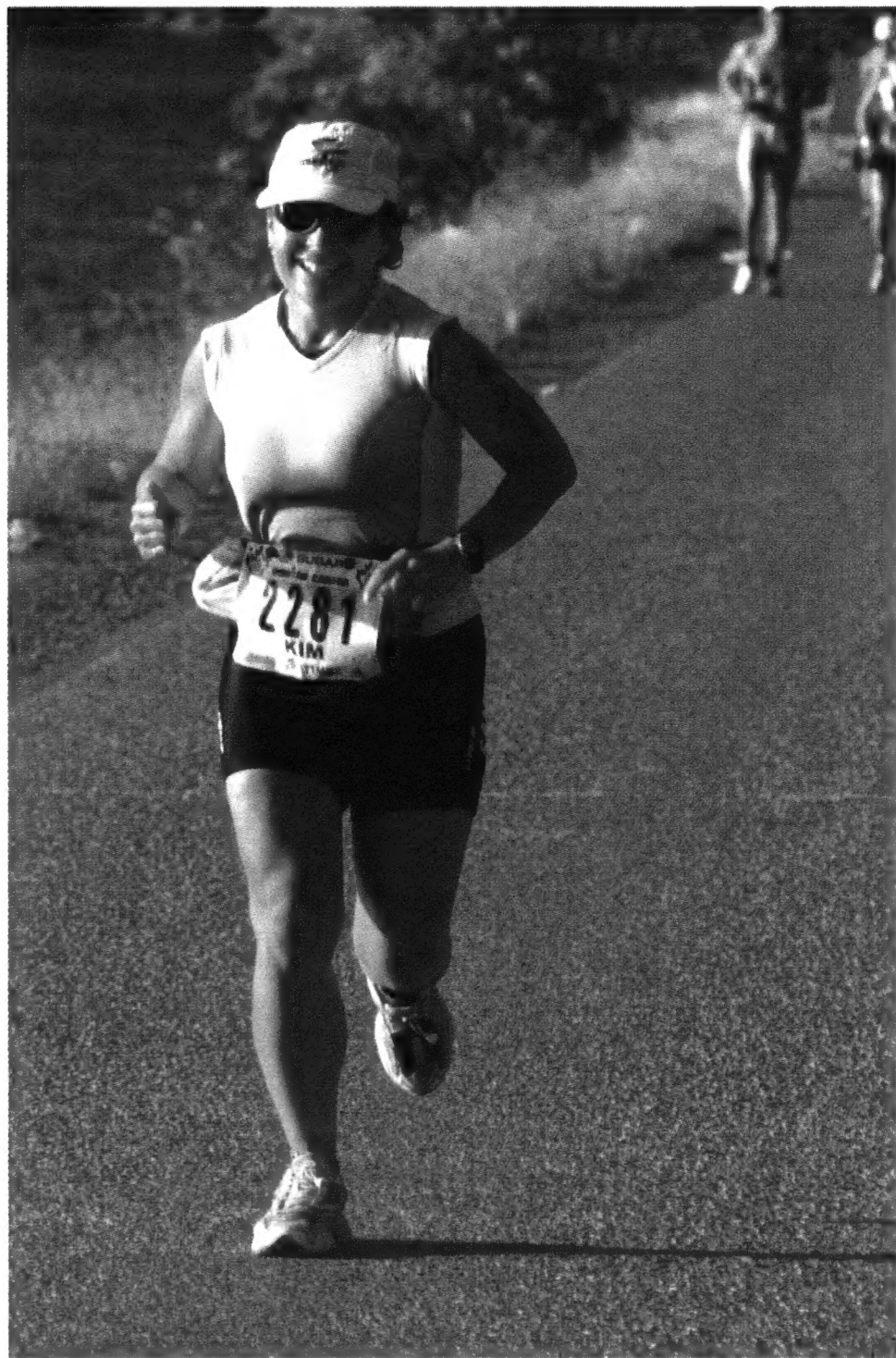
"The first time I swam 300 metres without stopping, my coach went to the other end of the pool and gave me a high five – this was a major accomplishment."

The following July she took the plunge at the International Triathlon Union event.

"It was my first open water swim (in Hawrelak Park pond)," she says. "I rented a wet suit and I panicked. I couldn't see where I was going, with all of the kicking



Kim Raine puts the pedal to the metal (above) before pounding the pavement (right) at the Iron Man Canada competition in Penticton, B.C., in August 2005.



and I totally freaked out. I kept going, but I held on to buoys for a while to regain my composure...It's unheard of that I did my 10-kilometre run faster than I did my 1,500-metre swim."

That's probably the point at which most people would throw in the towel. But last July she entered her first half Iron Man — Great White North — at Hubbles Lake in Stony Plain. This time she opted to wear the conspicuous white "panic cap" so officials would watch her more closely.

"I had a fantastic race, with a decent time, finishing the 2000-metre swim in 48 minutes, which for me was fantastic," says Raine. "I passed 212 people on the run – it's really nice to have your sprint at the end."

Her 5:49 time was good enough to place her in the top 10 in her over-40 age group, qualifying her for Iron Man Canada. It certainly wasn't something she'd planned to do, but she had to make her decision on the spot: "I was on sabbatical, so I just thought, 'What the hell, why not go for it?'"

And so she did, showing up in Penticton, B.C. in late August. The "Mighty Tough Women" surprised her by showing up the night before, writing well wishes with chalk along the race route: "They brought pompons and noise makers, and as I rode by they made a lot of noise."

The swim was the first leg of the event.

"There were 2,300 athletes in the race and only 100 behind me in the swim. I took an hour and 43 minutes to do my 3.8-kilometre swim...So I had nothing to do but catch up."

But in the middle of the 180-kilometre cycling leg, she hit what she calls "my loop of despair..." It was like riding in a convection oven — 40 degrees with the wind in your face. It was the only time in the race when I thought, 'What the heck am I doing?'"

She broke through that wall, however, especially after the "Mighty Tough Women" appeared at just the right time to spur her on. She had spent seven hours and 40 minutes on the bike when she dismounted, at which point she thought to herself; "Thank God, all I have to do is run a marathon, and I know how to do that."

At the half-way point of the 42-kilometre marathon, the "Mighty Tough Women" appeared once again, this time with music.

"I stopped, danced and sang 'I Will Survive' – I was having a ball, I was in the zone," she said.

She crossed the finish line in a total of 14 hours and 20 minutes, where she quickly quaffed a Stella Artois, "the best beer I ever tasted in my life."

So it was mission accomplished, and at first she claimed she'd never do it again.

"But I've revised that thinking. Now I'd like to see how fast I can do it. But not for a couple of years." ■

Taking egg from nest helps save cranes, research shows

By placing one egg in a 'foster-parenting' program, scientists boosted whooping crane population

By Phoebe Dey

Removing eggs from the nests of whooping cranes increases the endangered bird's chances of survival, despite government concerns about tampering with nature, says a University of Alberta scientist.

Dr. Mark Boyce, a professor of biological sciences in the U of A Faculty of Science, studied the policy of removing from Wood Buffalo National Park one of two whooping crane eggs laid, and raising it in a 'foster-parenting' program. Cranes usually rear a single chick, and the other is left to die or is killed by a predator, such as a wolf or fox. The egg-removal program was initiated several years ago by Ernie Kuyt, an Edmonton-based scientist who reasoned that one egg could be taken and used for artificial propagation programs.

The idea has been so successful that the crane's numbers have skyrocketed to more than 200 birds in the original population, Boyce said. Two new populations have been established elsewhere.

Parks Canada prefers that no further egg collections occur in Wood Buffalo National Park, due to concerns that egg removals may reduce the productivity of the whooping crane population and that more generally, human intervention and disturbance should be minimized. Boyce's research found, however, that taking one egg away actually increases the probability of nest success. His paper – co-authored by Subhash Lele of the U of A's mathematical and statistical sciences department and Brian Johns of the Canadian Wildlife Service – is published in the December issue of *Biological Conservation*.

The last remaining whooping crane population nests in Wood Buffalo and winters at the Aransas National Wildlife Refuge in Texas. At one point, the bird's numbers reached a low of 16 in 1942 but

the population has since increased to more than 200. Not only has the Wood Buffalo-Aransas population been enhanced by the egg removal program, but removing the eggs has allowed the establishment of additional populations like those in Wisconsin and Florida, and a sizeable captive flock. Taken together, the benefits to the conservation of the species have been very substantial, Boyce said.

"Luckily, at the moment the program is so successful that there is no reason to collect more eggs," said Boyce. "But for Parks Canada to intervene with a formal policy to prohibit future egg collecting is inappropriate and flies in the face of the data, as we present in our paper."

Boyce suggests several reasons why a chick might survive when an egg is removed from a nest. Sibling aggression has been so strong that some firstborn chicks have been observed pecking the other one to death. Also, a pair of chicks is more likely to attract the attention of a predator, and parents can be more attentive if they only have a single chick to protect.

Even though long-term fitness is similar whether one egg or two is laid, the risk of extinction for the Wood Buffalo-Aransas whooping crane population is lowest when eggs are removed, Boyce said. He recognizes the need to minimize human influence in national parks but believes priority should be given to ensure persistence of threatened and endangered species so that diversity is not lost permanently.

"Surely we cannot appreciate benefits to ecological-process management if components of the ecosystem are missing."

This research was supported by the Natural Sciences and Engineering Research Council of Canada and the Alberta Conservation Association. ■



Lead author Dr. Mark Boyce (left) and one of the study's coauthors, Subhash Lele (right). In Boyce's view, minimizing human influence in national parks is important, but the prohibition of egg collection by Parks Canada is inappropriate since it's more important to prevent the extinction of species.

Gold medalist inspired by scholarship's namesake

Lori-Ann Muenzer was a close friend of deceased pharmacy student Brenda Miller, after whom a new scholarship has been named

By Richard Cairney

She's the only Canadian cyclist to bring home a gold medal from the Olympics, so when Lori-Ann Muenzer told a group of University of Alberta students she was in awe of their achievements, the compliment went a long way.

"I've been listening to all these awards being handed out and I'm thinking, 'Wow! I'm so inspired,'" said Muenzer, who addressed pharmacy and pharmaceutical sciences students on the evening of Nov. 24, at the faculty's annual awards night.

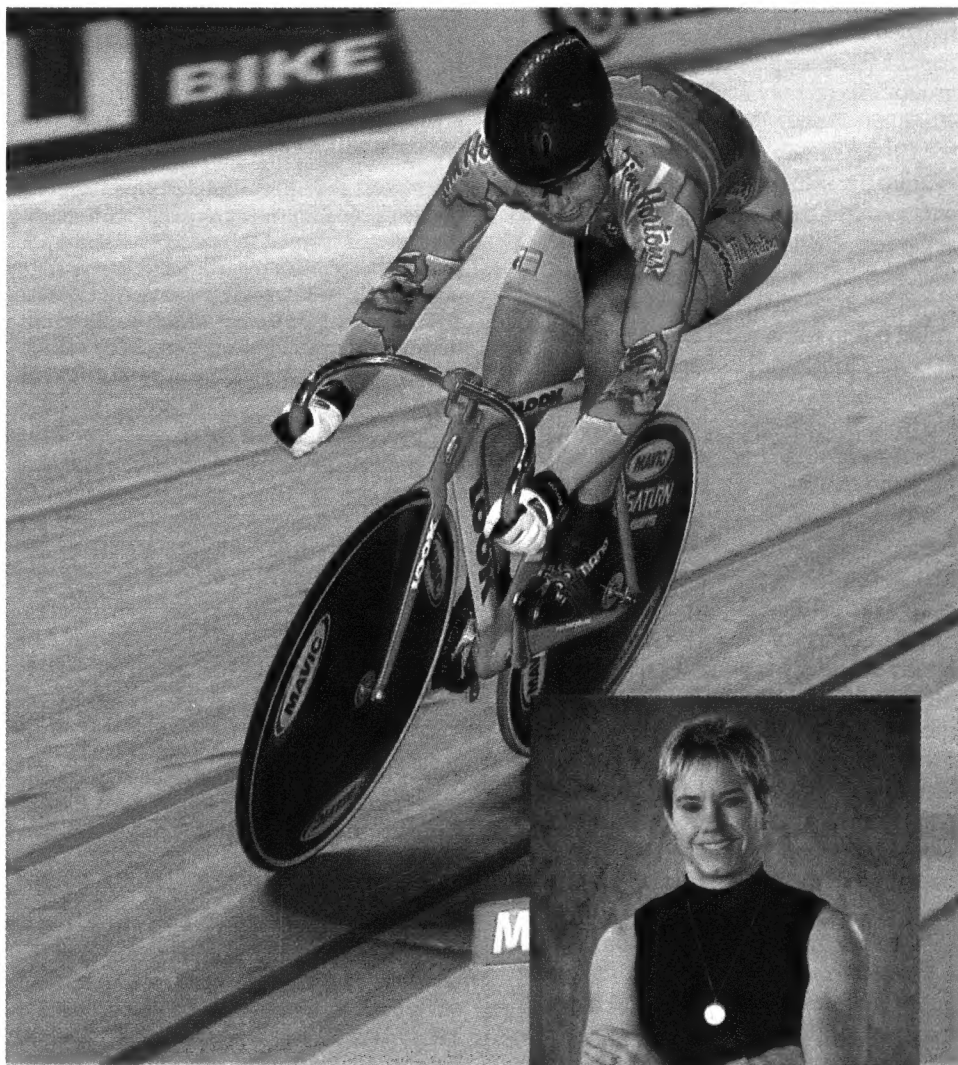
Muenzer has a special connection to the faculty's awards, in a roundabout way. The Edmonton-based Olympian, who won a gold medal in women's match sprints in Athens last year, was close friends with U of A alumna Brenda Miller, who won the faculty's Alberta Pharmaceutical Association Gold Medal in 1976.

The pair worked out together and Miller spearheaded fund-raising efforts that enabled Muenzer to compete at international events. In 2002, just as Muenzer was about to enter a gruelling competition in Quito, Ecuador, she received word that Miller had been killed in a cycling accident.

"Before the race I thought about Brenda and what she'd say, and she'd have said 'Do your best.' I set three records that afternoon."

Miller has continued to be an inspiration. Her husband, Jack McCutcheon, gave Muenzer his wife's pharmacy gold medal. Muenzer wears it in every race she competes in.

"I have worn this since February 2003," she said. "Whenever I leave for a trip I put it on and it stays on. It's one of these things



(Above) Gold medalist Lori-Ann Muenzer at a competition in Melbourne, Australia. (Right) Olympian Lori-Ann Muenzer wears a different kind of gold medal won in 1976 by the late Brenda Miller, a U of A alumna.

you'd keep close to your heart. Part of the inspiration has been carrying this medal and wearing it with honour."

The medal, she said, is a memento of a friend who believed in her. "Of course, part of the journey is a little scary and a little lonely. But it helps to know that one person believes in you," she told the pharmacy students.

"To everyone here tonight, I believe each of you has a gold medal. If you can see it and believe it you can go out and achieve it. It's your everyday effort that counts."

As Muenzer spoke of Miller's faculty medal, she made reference to her own gold medal earned in Athens. Before heading to the podium to give her speech, Muenzer left it in the temporary care of pharmacy student and academic all-Canadian Sara Houlihan, a member of the Pandas' national champion field hockey team who happened to be seated next to the Olympic champion.

"You should see that thing! I never thought I'd be holding an Olympic medal," Houlihan said, following the talk. "I feel I've invested a lot of my life into our team's gold medal too, so to hear Lori-Ann talk about her experiences has been great. It was neat that an Olympian would be comparing her accomplishments to our academic achievements."

Those achievements were given even greater recognition as the faculty announced the London Drugs/Brenda Miller Memorial Scholarship in Pharmacy. The \$20,000 endowment will award a pharmacy student with \$1,000 award annually. The award's first recipient is third-year student Doreen Au. ■



Human ecology professor Lori Harach has launched a research project on why teens use crystal methamphetamine, and how kids can be better protected.

Prof studies ways to protect kids from crystal meth

Researcher hopes to help those at risk of abusing the street drug

By Beverly Betkowski

A University of Alberta researcher is exploring how to help parents protect their children from crystal methamphetamine addiction, and is looking for input from people affected in one way or another by the drug.

After reading letters of concern in a Sherwood Park newspaper, Dr. Lori Harach, a professor of Human Ecology at the U of A, knew she wanted to launch a research project on why adolescents use the drug, and how to prevent it from happening.

"I kept seeing letters to the editor every week, from parents expressing concern about the use of crystal meth in the community and the impact the drug had on their families. They also expressed concern because they didn't know their child was using crystal meth until it was too late. It made me wonder, what else is going on with these kids?"

Most established research has so far focused on how to treat the potent effects of crystal meth use, but Harach wants to explore what pushes young people into using it in the first place.

"When it comes to crystal meth, it's a completely new area that hasn't been touched. I believe there are some variables that will overlap between substance abuse literature that is already out there and crystal meth issues, but the fact that it is so cheaply made, so easy to access and so cheap to buy, makes it unique."

The drug sells for about \$50 per gram. "You can spend \$10 and be high for four to 12 hours or longer compared to, at the same price, crack cocaine, which would give a high for 20 minutes. That is also driving the popularity of crystal meth," Harach noted.

The drug is concocted into a toxic cocktail using household cleaners, paint thinner, ammonia, lithium from batteries and certain cold medications. It can be ingested in two forms—crystal or 'ice' form, and powder form, and is usually smoked. It acts quickly and destroys the pleasure centres of the brain, so that with long-term use, the only thing that provides the user a sense of relief is the drug itself. Prolonged use also causes skin lesions and the teeth to fall out.

Harach, whose area of research is parent-child interactions and relationships, will begin collecting data in January using questionnaires and focus groups of university students. A larger study will follow next spring, when Harach plans to visit

"On the individual level, I will look at self-esteem, pressure to achieve and body image. There is some indication that females are using crystal meth to lose weight. That's a particularly vulnerable group."

— Dr. Lori Harach

schools and to investigate the factors that both protect adolescents and contribute to substance abuse from the perspective of families and adolescents. She will focus on teens between 14 and 18 years of age.

"On the individual level, I will look at self-esteem, pressure to achieve and body image. There is some indication that females are using crystal meth to lose weight. That's a particularly vulnerable group." Teens may also be using it as a stimulant to stay awake while studying.

On the family level, Harach will explore parenting style and how parents monitor their children's friends and activities. She'll also study the quality of time and how much of it a family spends together. Responsibilities and finances doled out to teens will also be explored. "Do they work for their spending money, do they have chores, or are they given a credit card that is paid off for them every month? Are they given money they don't have to be accountable for?"

Through her research, Harach hopes to eventually define predictors – the factors that lead teens to use the drug – and protective factors that deter use of the drug. "That information could be used at the family level for awareness, but it could also be incorporated into counselling or workshops for communities."

Harach believes that one of the keys to coping with the problem will be found in parent-child relationships. "I think there's going to be something small that is usually overlooked that will be uncovered in this research.

"Rather than a global parenting style, it is going to come down to something more intimate between the parents and the adolescent. It could be the comfort level adolescents have in terms of sharing their day-to-day lives with their parents, or the extent to which adolescents are treated with respect, while at the same time given rules and structure. There should be some very basic strategies we can identify for families." ■

talks & events

Submit talks and events to Lorraine Neumayer by 12 p.m. Thursday one week prior to publication. **Folio Talks and Events listings do not accept submissions via fax, mail, e-mail or phone. Please enter events you'd like to appear in Folio and on ExpressNews at: <http://www.uofaweb.ualberta.ca/events/submit.cfm>.** A more comprehensive list of events is available online at www.events.ualberta.ca.

UNTIL MAR 16 2006

Conserving Biodiversity in Northern Cities Leading researchers from around the globe will be speaking about conservation issues within northern cities. The series is free of charge and open to the public. Registration is not required. 4:30 p.m. Engineering Teaching/Learning Complex Room 1 007.

UNTIL JAN 4 2006

Laura Evans Reid (1883-1951) Works featured are from the University of Alberta Art Collection, Department of Museums and Collections Services. Evans Reid began painting in 1935, initially with a small group of amateur artists in Vegreville.

UNTIL DEC 17 2005

Seeing the World of Sound: The Cover Art of Folkways Records Considered one of the world's most influential and eclectic music and sound collections, Folkways Records also represents a rich visual archive through its cover art and design. Now, this often discussed but little explored dimension of the Folkways legacy is presented in an exhibition by folkways Alive and the Department of Art and Design at the University of Alberta. 1-1 Fine Arts Building.

UNTIL DEC 17 2005

SEEING THE WORLD OF SOUND: The Cover Art of Folkways Records The cover art on the Folkways Recordings represents an extremely important chapter in the history of popular visual culture within the arts. The Exhibition highlights the multi-dimensional nature of the cover art and its representation of musical content. Fine Arts Building Gallery.

UNTIL DEC 4 2005

Dinner At Eight By George S. Kaufman & Edna Ferber Directed by John Kirkpatrick Featuring the 2nd year BFA Actors. The secret lives of New York society people come bubbling to the surface in a frothy, bubbly, and heart-breaking play about the games people play with little regard to the carnage left behind. Written by two of the greats of early 20th Century American Theatre, *Dinner at Eight* was a wildly popular hit on Broadway in the 1920s. Please sign-up on the sheet posted outside the Drama office (3-146 FAB) after Monday, Nov. 28 to reserve a free seat. Corner Stage Fine Arts Building.

DEC 2 2005

Sexually selected infanticide in Norwegian brown bears Dr. Jon Swenson, Department of Ecology and Natural Resource Management, Norwegian University of Life Sciences is presenting a seminar on "Sexually Selected Infanticide in Norwegian Brown Bears". 12:00 p.m. M-145, Biological Sciences Building.

Physics Colloquium Speaker: Rene Ong, University of California, Los Angeles Title: "Exploring the Extreme Universe." This talk will survey the astrophysics of the extreme Universe, as revealed by observations made with gamma rays, cosmic rays, and neutrinos. Special emphasis will be placed on the results from gamma-ray telescopes operating in the TeV energy range. 3:15 p.m. - 4:00 p.m. V128 Physics.

Pattern and identity in plant vascular development Mike Deyholos, Department of Biological Sciences, University of Alberta is presenting a seminar on "Pattern and identity in plant vascular development" as part of the Genetics 605 Graduate Student Seminar Series. 3:30 p.m. M-149, Biological Sciences Building.

Bears Hockey Bears vs. Lethbridge. 7:30 p.m. Clare Drake Arena, Van Vliet Physical Education and Recreation Centre.

The University of Alberta Concert Choir The University of Alberta Concert Choir Debra Cairns, Conductor Jordan Van Biert, Assistant Conductor Works by Gabrieli, Schuetz, Mendelssohn, Dvorák, Wolf, Archer, and Grandage 8:00 p.m. Arts Building/Convocation Hall.

DEC 3 2005

Building National History: How Should We Talk About Canada's Past? Dr. Patricia McCormack, Associate Professor, Native Studies 2:00 p.m. - 3:30 p.m. Stanley A. Milner Library (Basement in the Edmonton Room), 7 Sir Winston Churchill Square.

Bears Hockey Bears vs. Lethbridge. 7:30 p.m. Clare Drake Arena, Van Vliet Physical Education and Recreation Centre.

Happnin' U of A Jazz Choir Happnin' U of A Jazz Choir John McMillan, Director. 8:00 p.m. Arts Building/Convocation Hall.

DEC 3 – DEC 4 2005

MAGNIFICAT Magnificat, featuring The Augustana Choir, Dr. Ardelle Ries, Director; Sangkor, Prof. Kathleen Corcoran, Director; The Augustana Men's Chorus, Dr. Ardelle Ries, Director; Dr. Roger Admiral, piano; Dr. Milton Schlosser, organ; and Camrose United Church Handbell Choir, Darryl DeWalt, Director. Tickets: \$12 (adults); \$8 (students/seniors), \$38 (family). Available in advance at the Augustana switchboard and Candler Art Gallery. R.A.R.E. 8:00 p.m. Augustana Chapel, 4901 - 46 Ave., Camrose, AB.

DEC 4 2005

The University of Alberta Concert Band The University of Alberta Concert Band Wendy Grasdahl, Conductor Milhaud Suite Français Rouse Swing Low, Sweet Chariot Persichetti Divertimento for Band, Op.42 Hindemith March from Symphonic Metamorphosis Ives Old Home Days Fucik Florentiner March 3:00 p.m. Arts Building/Convocation Hall.

The University of Alberta Madrigal Singers The University of Alberta Madrigal Singers, Leonard Ratzlaff, Conductor. Jolaine Kerley, soprano. Guests of the Alberta Baroque Ensemble Magnificat: Perti Alles, was ihr tut: Buxtehude Gloria: Handel 3:00 p.m. Robertson-Wesley United Church.

The University of Alberta Symphonic Wind Ensemble The University of Alberta Madrigal Singers Leonard Ratzlaff, Conductor Jolaine Kerley, soprano. Guests of the Alberta Baroque Ensemble Magnificat: Perti Alles, was ihr tut: Buxtehude Gloria: Handel. 7:30 p.m. Robertson-Wesley United Church.

DEC 5 2005

Music at Noon, Convocation Hall Student Recital Series Music at Noon, Convocation Hall Student Recital Series Featuring students from the Department of Music 12:00 p.m. Arts Building/Convocation Hall.

Rural Economy Seminar Rural Economy Seminar. David L. Martell, Professor, Faculty of Forestry, University of Toronto. "FireSmart Planning for Timber Production." 3:00 p.m. 515 General Services Building.

Grant MacEwan College/University of Alberta Jazz Bands Grant MacEwan College/University of Alberta Jazz Bands. Raymond Baril and Tom Dust, Directors. An Evening of Big Band Jazz. 7:30 p.m. John L. Haar Theatre, Centre for the Arts, Grant MacEwan College.

DEC 6 2005

Visiting Speaker Seminar: "Nutrition Influences Responses to Inflammatory and Surgical Stress: Stable Isotope Studies in Piglets and Patients." Dr. Linda Wykes, Associate Professor and William Dawson Scholar, McGill University 11:00 a.m. Classroom F WMC.

Inflammatory cytokines in goldfish John Walsh, M.Sc. Candidate (Belosevic), Department of Biological Sciences, University of Alberta is presenting a seminar on "Inflammatory cytokines in goldfish" 12:00 p.m. T 1-90, Tory.

DEC 7 2005

PHS Grand Rounds Dr. Paul Veugelers, Associate Professor, Department of Public Health Sciences "Prevalence and Determinants of Childhood Overweight and Obesity." 12:00 p.m. - 1:00 p.m. Room 2-117, CSB.

APO Christmas Social Please come and join the APO Committee for the annual Christmas Social. This will be an opportunity for you to meet other Campus APOs and share in a beverage and a snack. We are honoured to have Chancellor Eric Newell as our guest speaker. 3:00 p.m. Maple Leaf Room Lister Hall.

Student Composers Concert Student Composers Concert with Roger Admiral, piano, featuring solo-piano works by student composers (Music 259). 4:00 p.m. Studio 27 Fine Arts Building.

DEC 8 – DEC 9 2005

Inner Sanctums, Outer Spaces: A Graduate Colloquium The University of Alberta's Medieval and Early Modern Institute (MEMI) presents its third annual graduate colloquium, "Inner Sanctums, Outer Spaces." This international conference will feature more than 20 presentations on a variety of cultural, literary and historical subjects ranging

from gender to warfare, politics and devotion in the medieval and early modern periods. Members of the community are welcome to attend these sessions. For more information, please visit the MEMI website (<http://www.ualberta.ca/~sheilac/ISOS.html>) or contact rob.desjardins@ualberta.ca. 9:00 a.m. - 5:00 p.m. Room 4-5 Business Building.

DEC 8 2005

Lunch by the Books Serial Homocides in Edmonton A public lecture by Bill Pitt, Department of Sociology (Criminology) 12:00 p.m. - 1:00 p.m. Stanley Milner Branch (downtown), Edmonton Public Library, 7 Winston Churchill Square.

DEC 9 2005

Emails @ Work One day learning opportunity for U of A staff around the more effective use of email. 8:30 a.m. - 4:15 p.m. 105 Law Centre.

Applying for Alberta Ingenuity Scholarships Speakers from Alberta Ingenuity will share information and application tips on the AI Scholarships (formerly Studentships). 4th-year undergraduate students, 1st-year M.Sc. and PhD students and professors recruiting graduate students should find this workshop particularly helpful. Register online at the Learning Shop. 9:00 a.m. - 10:30 a.m. E2-001 Engineering Teaching and Learning Complex (ETLC).

Applying for Alberta Ingenuity Industrial Associateships Speakers from Alberta Ingenuity will share information and application tips on the AI Industrial Associateships. This workshop will be of particular interest to M.Sc. and PhD students in their final year of study and recent (less than five years) M.Sc./PhD graduates interested in working in Alberta industry. Register to attend at the Learning Shop. 11:00 a.m. - 12:00 p.m. E2-001 Engineering Teaching and Learning Complex (ETLC).

Applying for Alberta Ingenuity New Faculty Grants The Alberta Ingenuity New Faculty Grant program helps expand and strengthen Alberta's science and engineering research capacity by providing start-up support, primarily operating funds, to independent investigators who have their first academic appointment at Alberta universities or colleges. Eligible faculty are welcome to attend this workshop to learn more about how to apply for this program. Representatives from Alberta Ingenuity will be able to answer questions. Please feel free to bring your lunch. 12:00 p.m. - 1:00 p.m. E2-001 Engineering Teaching and Learning Complex (ETLC).

Physics Colloquium Speaker: Dr. Pawel Artymowicz University of Toronto. Title: "Understanding the extrasolar planetary systems: theories of disks and planets" I discuss the recent developments in the old debate about top-down vs. bottom-up formation scenario of giant planets, the three modes of migration of protoplanets in the protoplanetary disks, and the origin of interesting structure found in the recent imaging of the dusty disks. Coffee and cookies will be available at 3:00 p.m. outside of V128. Department colloquia are intended to benefit all students and staff. 3:15 p.m. - 4:00 p.m. V-128 Physics.

Speaker Series: "Physical Inactivity in the 21st Century: It is time to rage against the machine?" Speaker: Dr. John Spence, behavioural medicine scientist in the Faculty of Physical Education and Recreation. Everyone is welcome! Light refreshments served following the presentation. 3:30 p.m. - 4:30 p.m. E-121 Van Vliet Physical Education and Recreation Centre.

DEC 10 - DEC 11, 2005

4.48 Psychosis by Sarah Kane, Directed by MFA Directing candidate Stefan Dzeperoski "But you have friends. What do you offer your friends to make them so supportive? What do you offer?" Please sign-up on the sheet posted outside the Drama Office (3-146 FAB) after Monday, December 5th to reserve a free seat. 3-125 Fine Arts Building.

Mud by Maria Irene Fornese Directed by MFA Directing Candidate Ian Leung Directed by MFA Candidate Ian Leung See Mae. Mae lives in a shack with Lloyd. Lloyd has two pigs. Lloyd is sick and lazy.

One day Mae is going to leave Lloyd. Mae is going to school and learning. Mae is going to die with clean feet. Lloyd can stay and rot in the mud. See Henry. Henry is older and smarter than Lloyd. Mae wants Henry. Henry likes Mae. Henry moves in. Lloyd is sad. Henry is happy. Mae is in heaven. But then one day...Please sign-up on the sheet posted outside the Drama Office (3-146 FAB) after Monday, December 5th to reserve a free seat. 3-125 Fine Arts Building.

DEC 10 2005

Acing the Interview for students in Education The focus of this workshop is on how to prepare effectively for a job interview and how to respond to interview questions. Results from our employer survey about their practices and expectations regarding the interview process are included in this workshop. Please pre-register at CaPS (2-100, SUB). 10:30 a.m. - 12:00 p.m. 4-02, SUB.

Building a Teaching Portfolio Learn about what goes in a teaching portfolio and how to assemble an effective portfolio, as well as how to present your portfolio in a school board interview. Please pre-register at CaPS (2-100, SUB) 1:00 p.m. - 2:30 p.m. 4-02, SUB.

DEC 12 2005

Rural Economy Seminar Rural Economy Seminar Dr. Bill Hyde, Adjunct Professor, China's Center for Agricultural Policy, Chinese Academy of Sciences "The Global Economics of Forestry." 3:00 p.m. 550 General Services Building.

Hear's to Your Health Hear's to Your Health. Guillaume Tardif, violin. Alycia Au, violin. Aaron Au, viola. Lidia Khaner, oboe. Julie Amundsen, cello. Patricia Tao, piano. Happy Birthday Mozart! Sonata for violin and piano, K. 376: Mozart Oboe Quartet, K. 370: Mozart Piano Concerto, arr. for chamber ensemble: Mozart. 5:00 p.m. Foyer, Snell Auditorium, Walter Mackenzie Health Sciences Centre.

DEC 14 2005

Introduction to Collaboration (WestGrid Seminar Series) Join us for an Introduction to Collaboration. This presentation will focus on using collaboration tools for scientific research and will be presented by Brian Corrie. To attend this event, please send an RSVP to Jon Johansson at jonj@ualberta.ca 11:00 a.m. - 1:00 p.m. Access Grid Room (315 General Services Building).

PHS Grand Rounds Guest Speaker: Dr. Andrew Smith, Honorary Research Associate, Nuffield Laboratory of Ophthalmology, University of Oxford, United Kingdom "Utility Measures in Health Economic Evaluations: Evidence from Ophthalmology" 12:00 p.m. - 1:00 p.m. Room 2-117, Clinical Sciences Building.

DEC 15 2005

Inside/OUT 2005/2006 Speakers' Series: Modern Prejudiced Attitudes Toward Sexual Minorities Inside/OUT 2005/2006 Speakers Series Profiling LGBTQ-Related Work at the University of Alberta. All meetings on Thursdays from 5:00-6:00 pm in Room 7-152 (7th Floor Education North Building) Department of Educational Policy Studies, Faculty of Education. Today's Presentation: Modern Prejudiced Attitudes Toward Sexual Minorities: Insights from a Non-Student Sample Dr. Melanie Morrison, Assistant Professor Department of Psychology, University of Saskatchewan. For more information, please contact Kristopher Wells at kwells@ualberta.ca or Marjorie Wonham at mwonham@ualberta.ca 5:00 p.m. - 6:00 p.m. 7-152 Education North Education Centre.

DEC 17 2005

Cantillon Chamber Choir Cantillon Chamber Choir under the direction of Heather Johnson. Performing Benjamin Britten's Ceremony of Carols and other Christmas Choral Favourites. Tickets: \$12 (adults); \$8 (students/seniors), \$38 (family). Available only at the door. R.A.R.E. 8:00 p.m. Augustana Chapel, 4901 - 46 Ave., Camrose, AB.

NEW APPOINTMENT ALBERTA HERITAGE FOUNDATION for MEDICAL RESEARCH



Ms. Gail Surkan
Chair of the Board of Trustees

The Trustees and staff of the Alberta Heritage Foundation for Medical Research are pleased to announce the appointment of Ms. Gail Surkan as Chair of the AHFMR Board of Trustees, effective November 30, 2005. Ms. Surkan succeeds Harley Hotchkiss who was a member of the AHFMR Board of Trustees since March 31, 1999, and Chairman of the Board since February 1, 2000. Ms. Surkan was appointed to the AHFMR Board of Trustees by the Lieutenant-Governor of Alberta on March 15, 2000.

Ms. Surkan received a degree in economics with distinction from the University of Saskatchewan. She served four terms as Mayor of Red Deer from 1992 to 2004 and also served on Red Deer City Council from 1986 to 1992. Ms. Surkan has extensive experience as a consultant and analyst in various fields including strategic planning, tourism, northern communities, regional development policy, and economic development.

Ms. Surkan is a member of the University of Alberta Board of Governors as well as a member of the board of directors for a number of other organizations. She served as both Chair and Vice-Chair for the Provincial Health Council, a body created to evaluate health reform and report to the legislature.

Since 1980, AHFMR has awarded more than \$800 million to researchers at the University of Alberta, the University of Calgary, the University of Lethbridge, and their affiliated institutions. AHFMR was highly commended for the excellence of its achievements and activities in a report prepared by members of an International Board of Review in June 2004. In acknowledgement of this success the Alberta government has pledged an additional \$500 million to the Foundation's endowment, which now stands at \$1 billion. The endowment supports an annual investment of approximately \$45 million in health research in Alberta



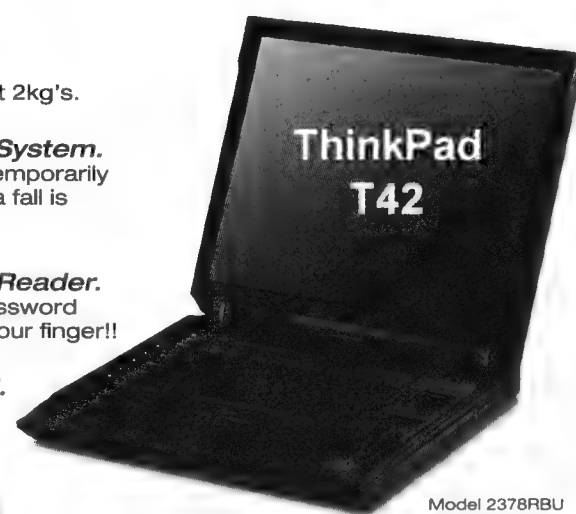
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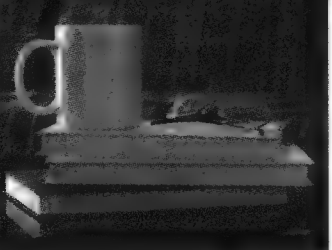
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The records arising from this competition will be managed in accordance with provisions of the Alberta Freedom of Information and Protection of Privacy Act (FOIP). The University of Alberta hires on the basis of merit. We are committed to the principle of equity of employment. We welcome diversity and encourage applications from all qualified women and men, including persons with disabilities, members of visible minorities, and Aboriginal persons. With regard to teaching positions: All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. For complete U of A job listings visit www.hrs.ualberta.ca.

DISCIPLINE OFFICER THE OFFICE OF STUDENT JUDICIAL AFFAIRS

The Office of Student Judicial Affairs (OSJA) is seeking a continuing or retired academic staff member to fill the position of Discipline Officer. Reporting to the Director, OSJA, the Discipline Officer is responsible for reviewing all non-academic charges laid under the Code of Student Behaviour and, when required, determining and assigning sanctions appropriate for violations. The Discipline Officer is also responsible for reviewing academic charges laid under the Code by Deans who have recommended that the students concerned receive Severe Sanctions. All decisions of the Discipline Officer are subject to appeal to the University Appeal Board.

Candidates for the position must have excellent oral and written communication skills; must be unbiased in both investigating and adjudicating cases; must have a clear understanding of the Code of Student Behaviour and a commitment to due process, natural justice and teachable moments; must be both empathetic and able to make difficult decisions, engaging in both rational and moral reasoning.

The Discipline Officer is appointed by the Vice-Provost and Dean of Students. The appointment is intended to be a two year term effective January 1, 2006, though start date and length of appointment are negotiable. Remuneration will be in the form of course release and/or an honorarium.

Applicants should reply by December 14, 2005, enclosing a curriculum vitae, and a letter indicating reasons for interest in the position to:

Dr. Bill Connor,
Vice-Provost and Dean of Students
5-02 Students' Union Building
Edmonton, Alberta T6G 2J7

ASSISTANT DEAN FACULTY OF SCIENCE

The Faculty of Science at the University of Alberta invites applications for the position of Assistant Dean. Reporting directly to the Dean, the Assistant Dean leads the financial, administrative, and information technology planning and operation for the Faculty. As the financial officer and senior advisor to the Dean and Vice Dean on all financial matters, the successful applicant will make decisions on resources and provide leadership and coordination to ensure their optimal distribution. This position will also develop, implement, and manage efficient and effective administrative support services, determine physical resources allocation, and lead the Information Technology plan operations.

The successful applicant will have a related post-secondary degree, with strong financial management, strategic planning, human resources, managerial and budgeting experience. Proficiency with MS Office applications, including spreadsheets and databases is essential. Experience with academic, financial and human resource policies, procedures, and administrative information systems (PeopleSoft Financials and Human Resources) at the University of Alberta is an asset.

This is full-time continuing Administrative Professional Officer position with a salary range of \$64,072 to \$101,452 per annum. Please submit applications, including the names of three references, by Friday, January 6, 2006, to:

Aneta Thompson, Human Resources Officer
Faculty of Science
CW 217 Biological Sciences Building
University of Alberta
Edmonton, Alberta, Canada T6G 2E9

MANAGER, E-LEARNING ACADEMIC INFORMATION AND COMMUNICATION TECHNOLOGIES

The University of Alberta's Academic Information and Communication Technologies (AICT) Department has a unique and challenging career opportunity for an individual who is interested in becoming part of our E-Learning Team. With a focus on partnership, the E-Learning Manager will provide leadership in the planning and delivery of E-Learning Services to enhance the University of Alberta's ability to carry out its vision and key strategies. This position will hold a key role at the university by providing senior administration with information on potential growth of the systems, including advising on policies and will develop business partnerships with industry in the support of the university's distributed learning initiatives. Additionally, this position will represent the university on various collaborative initiatives with other educational institutions provincially, nationally and internationally in support of E-learning to enhance the university's position in the educational community. While providing leadership to a senior team of professionals to achieve high quality delivery of enterprise wide computing services for teaching and learning support, the manager will take a lead role in the planning and development of strategic and tactical plans, including the establishment of goals, objectives, priorities, operational policies and guidelines for the E-Learning unit.

This position will oversee the development of the overall architectural design of the systems and will address long-term issues such as expansion, subsequent generations of systems, upgrades and security. The unit is also responsible for the development and delivery of professional development and training programs to on- and off-campus faculty/instructors, administrators, instructional designers, and technical support staff. The manager will provide guidance and decision making assistance to clients regarding technical support, software/hardware, E-learning products and technical services and will consult with faculties and departments to develop models of instructional planning and support.

Applicants will have a BSc. in Computing Science or a degree in adult education, Masters degree preferred. The preferred applicant will have 10 years or more experience in working collaboratively with faculty and providing expert consultation to a large E-Learning installation. Effective written, oral, teaching, and interpersonal communication skills are essential as well as extensive WebCT (Vista experience preferred), project planning and budgeting experience. The successful candidate will be experienced in instructional design and educational technology, have extensive training and experience in UNIX system administration (Sun Solaris) and computer programming in languages including Perl, Javascript, and Java. Desirable candidates will be designated as a WebCT Certified Trainer and will be familiar with standards and specifications including IMS and Scorm. Candidates will have a proven track record of implementing IT technologies within an organization and will possess leadership skills in order to support the development of efficient and effective service-orientated work teams.

We offer a comprehensive salary and benefits package in an environment that recognizes and rewards excellence. The salary range for this Administrative & Professional Officer position is \$59,383 - \$94,019 per annum.

Candidates are asked to submit a resume no

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later than December 23, 2005 to:

Christine MacDougall,
Human Resources Manager
Academic Information and Communication
Technologies
3-52 General Services Building
University of Alberta
Edmonton, Alberta T6G 2H1
AICT_Human_Resources@ualberta.ca

ASSISTANT/ASSOCIATE PROFESSOR THE SPEECH PATHOLOGY & AUDIOLOGY

The University of Alberta – Faculty of Rehabilitation Medicine, Department of Speech Pathology & Audiology and Institute for Stuttering Treatment and Research invite applications for a researcher at the level of Assistant or Associate Professor. Qualified candidates should hold a doctoral degree and demonstrate outstanding potential for an independent research career in fluency disorders. Candidates will establish a novel research program in collaboration with the Institute for Stuttering Treatment and Research and with other researchers. A strong background in neuroscience and/or clinical research is highly desirable.

The position will be dedicated primarily to research but will offer opportunities for graduate teaching and research supervision. This position will be supported by four years of bridge funding to enable the establishment of a productive research program. To sustain the position and be eligible for a tenure-track appointment, the candidate will be expected to obtain a personnel award from an external granting agency such as Alberta Heritage Foundation for Medical Research (www.ahfmr.ab.ca) or the Canadian Institutes for Health Research (www.cihr-irsc.gc.ca). The granting of these highly competitive awards is on the basis of excellence.

Salary is commensurate with qualifications and experience. Applications will be accepted until the position is filled. The position is available as soon as a suitable candidate is found. Candidates should forward their curriculum vitae, copies of recent publications, an outline of research and clinical interests and the names of three referees to:

Dr. Albert Cook, Dean
Faculty of Rehabilitation Medicine
3-48 Corbett Hall, University of Alberta
Edmonton, Alberta, Canada T6G 2G4
Phone 780-492-5991; Fax 780-492-1626
Email: al.cook@ualberta.ca

The Speech Pathology & Audiology (SPA) Department offers one of the largest speech-language pathology university programs in Canada and is highly regarded for the outstanding academic, clinical, and research preparation of its graduates and its supportive learning environment. Department faculty members are actively involved in individual and collaborative research in basic and applied communication sciences (see www.uofaweb.ualberta.ca/rehabmed/spa.cfm). Recognized internationally for the excellence of its clinical programs, the Institute for Stuttering Treatment and Research (ISTAR) is an educational, research and clinical facility specializing in the investigation and treatment of stuttering. It provides treatment to more than 150 clients per year and attracts clients, student trainees and visitors from around the world (www.istar.ualberta.ca). The Faculty of Rehabilitation Medicine houses programs in Physical Therapy, Occupational Therapy, and Speech-Language Pathology, and also offers interdisciplinary research master's and doctoral programs in rehabilitation science. Opportunities abound for cross-disciplinary collaboration with researchers within and outside of the Faculty. Canada's fifth largest municipality and the province's capital, Edmonton offers a high quality affordable lifestyle in a natural setting close to the Rocky Mountains.

ELECTRICAL AND COMPUTER ENGINEERING – FACULTY POSITIONS

The Department of Electrical and Computer Engineering at the University of Alberta invites applications for several tenure-track faculty positions at the Assistant/Associate Professor level. Exceptional candidates are being sought in all areas of Electrical Engineering, Computer Engineering, and Engineering Physics. Areas of special interest include Biomedical Engineering (biomedical imaging analysis, biomedical signal processing, genomic analysis, biosystem modeling, drug delivery systems, systems biology), Signal and Image Processing (multimedia applications, video transmission, signal and image processing with applications in biomedical systems), circuits (RF electronics, microwave devices, analog and mixed signal circuits and signals, high speed digital integrated circuits), Nanoengineering (nanoelectronic devices, MEMS and bioMEMS), and Electromagnetics (applied electromagnetics, computational EM, antenna arrays).

Candidates must have earned (or expect) a PhD in electrical and computer engineering or a closely related area and have a strong commitment to research and teaching. Postdoctoral and/or industrial experience will be considered an asset.

The candidate is expected to seek registration as a Professional Engineer in the province of Alberta.

The Department is undergoing an expansion and is committed to securing a position among the leading schools in North America. At present, we have over 50 faculty members. Our graduate program attracts outstanding students from the best schools worldwide and presently has an enrollment of over 300 students, including approximately 140 PhD candidates. The undergraduate programs in Electrical Engineering (which includes a new option in biomedical engineering), Computer Engineering (which includes an option in Software Engineering), and Engineering Physics (with an option in Nanoengineering), enroll over 800 students.

Research and teaching needs are served by two new buildings with a total area of 31,000 square meters. There is a unique world-class nano and microfabrication facility located in the same building, and the National Institute for Nanotechnology is being built nearby. The undergraduate and graduate laboratories are generously equipped with state of the art equipment, and excellent computing facilities are available. Extensive funding opportunities are available through a variety of national and provincial sources. Further information about the Department can be found at www.ece.ualberta.ca.

Applicants are invited to submit their curriculum vitae including employment history, a statement outlining research and teaching interests, a brief description of major contributions, reprints of at least two representative research papers, and the names of at least three referees to:

Dr. H. J. Marquez, Chair
Department of Electrical and Computer Engineering
The University of Alberta
Edmonton, Alberta, Canada T6G 2V4
E-mail: marquez@ece.ualberta.ca

The application review process will begin January 1, 2006 and will continue until the positions have been filled.

UNIVERSITY OF ALBERTA, AUGUSTANA FACULTY

The University of Alberta's new Augustana Faculty has embarked on a dynamic, multi-year program of renewal and growth. It expects to make at least three appointments at the rank of Assistant Professor, commencing July 1, 2006, for which it invites applications in the disciplines indicated below.

The Augustana Faculty teaches more than 1,000 students in baccalaureate degree programs on a picturesque residential campus in the city of Camrose, 90 km southeast of Edmonton. After a long educational history, including two decades as an independent, degree-granting university college, Augustana was incorporated into the University of Alberta in July 2004. The Faculty is committed to building on its reputation for rigorous, high-quality teaching in the tradition of the liberal arts and sciences, and, in doing so, providing a distinctive undergraduate academic experience for students within one of Canada's leading universities. It seeks to attract promising scholars who will share its enthusiasm for teaching in a small-campus environment, participate actively in a collegial culture of inquiry and public engagement, and flourish as researchers in an undergraduate, interdisciplinary, and rural location.

For all positions, the ability to contribute to areas of interdisciplinary strength and interest for the Faculty will be an asset. Those areas include environmental studies, international development studies, rural and northern studies, and women's studies.

For information about Augustana and particular programs, please consult the Faculty website at www.augustana.ca. Inquiries concerning any of the positions in this advertisement should be directed to the Chair of the relevant department.

ART (STUDIO)

The Department of Fine Arts invites applications for a position in art studio. This position requires a generalist with an MFA in a studio discipline (or equivalent) to teach a broad range of studio practices for an art program within a liberal arts degree program. This program concentrates on traditional practices within a contemporary milieu and seeks connections to a wide array of inquiry. Foundation studies will form the core of this position but it will also include introductory and senior courses in drawing, painting, sculpture, and digital media. Candidates must demonstrate a versatile teaching ability that can address students at diverse stages of artistic awareness. Post-secondary teaching experience is essential as is demonstrated proficiency in descriptive drawing methods. Secondary teaching experience would be an asset. Candidates should also have an active studio practice in one of the aforementioned areas. Opportunities for interdisciplinary teaching are available, so scholarly knowledge and experience in aesthetics, theory, history, and contemporary developments in the art world would be an asset. Applicants should submit curriculum vitae, including evidence of successful teaching and examples of their recent studio work. The latter can be slides or a CD-ROM in JPEG or TIFF formats. Chair: Keith Harder (keith.harder@ualberta.ca).

Display advertisements: Camera-ready artwork is required to size, complete with halftones if necessary. Call 417-3464 for sizes, rates and other particulars.

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BIOLOGY

The successful candidate will have a PhD in either Microbiology or Molecular Biology and will be expected to teach courses in both areas. Applicants should be interested in helping to build a student-friendly, teaching-oriented Biology program that also recognizes the value of research. Chair: Dr. Neil Haave, Science (neil.haave@ualberta.ca).

ECONOMICS/MANAGEMENT

This position involves teaching in both the Economics and Management programs. While any area of specialization will be considered, preference will be given to applicants whose teaching interests include Industrial Organization and Public Finance, and who can contribute to the development of a relatively new Management program. Applicants should possess a PhD in Economics, Finance or Business, or be near completion of that degree. An additional full-time, term-limited appointment in Management is also being contemplated. Chair: Dr. Jeremy Mouat, Social Sciences (jeremy.mouat@ualberta.ca).

ENVIRONMENTAL SCIENCE/STUDIES

The successful candidate will contribute to two proposed interdisciplinary programs, a B.Sc. in Environmental Science and a BA in Environmental Studies. Applicants should be able to teach GIS, statistics, and senior courses in a specialty area. Ability to teach related environmental courses (e.g., resource management, freshwater systems, field methods, history, or politics) would be an asset. Applicants should possess or be near completion of a PhD in Environmental Science/Studies, Geography or related field. Chair: Dr. Neil Haave, Science (neil.haave@ualberta.ca).

MUSIC

The successful candidate will teach in two of the following three areas: music history, music theory and ethnomusicology. Opportunities for teaching in music composition, women's studies and interdisciplinary studies may also be available. Applicants should have expertise and interest in introducing students to a variety of music (classical, popular, world) and contemporary critical perspectives. A completed PhD or equivalent is the mini-

mum academic qualification. Chair: Keith Harder, Fine Arts (keith.harder@ualberta.ca).

PHILOSOPHY

The successful candidate will become the fourth member of a new degree program in Philosophy and Religion. Applicants should have expertise in at least one area of the history of philosophy and be competent to teach a variety of undergraduate classes, including introductory courses and critical thinking. The ability to teach a course in Philosophy and the Environment will be an asset. Applicants should possess or be near completion of a PhD. Chair: Dr. Paul Harland, Humanities (paul.harland@ualberta.ca).

PHYSICAL EDUCATION

The successful candidate will teach in the area of exercise sciences as one of five faculty members in a Physical Education degree program that covers two streams: Kinesiology and Sport Studies, and Outdoor Education. Candidates should have expertise in at least two areas of exercise sciences and be competent to teach a variety of undergraduate classes such as human anatomy, exercise physiology, advanced training methodologies, biomechanics, and human physiology. A research interest in the area of fitness and aging will be an asset. Applicants should possess or be near completion of a PhD. Chair: Yvonne Becker, Physical Education (yvonne.becker@ualberta.ca).

All appointments will be made at the rank of Assistant Professor. The current salary scale begins at \$53,580; the benefit package is comprehensive.

Applicants should submit curriculum vitae, including evidence of successful teaching and samples of scholarly work, and arrange to have transcripts and three confidential letters of reference sent to:

Dr. Roger Epp
Dean (Acting)
Augustana Faculty
University of Alberta
4901-46 Avenue
Camrose, AB, T4V 2R3
Email: Roger.Epp@ualberta.ca
Consideration of applications will begin as early as January 4.

notices

Please send notices attention Folio, 6th floor General Services building, University of Alberta, T6G 2H1 or e-mail public.affairs@ualberta.ca. Notices should be received by 12 p.m. Thursday one week prior to publication.

EFF – FSIDA (FUND FOR SUPPORT OF INTERNATIONAL DEVELOPMENT ACTIVITIES)

The deadline for receipt of applications to the EFF – FSIDA is 4:30 PM, January 16, 2006. The next competition deadline date is April 17, 2006.

This Fund exists to enable staff and graduate students of the University of Alberta to participate in research and in the international transfer of knowledge and expertise through partnerships in developing countries.

Applications and guidelines are available on the University of Alberta International website <www.international.ualberta.ca> or from the FSIDA Secretary at University of Alberta International, 1204 College Plaza, 8215-112 Street, telephone 492-2391.

AWARDS FOR TEACHING EXCELLENCE

The GFC University Teaching Awards Committee (UTAC) announces to the University community that nominations are now being sought for the annual Rutherford Award for Excellence in Undergraduate Teaching, WH Alexander Award for Excellence in Sessional Teaching and the Teaching Unit Award. The purpose of these awards is to recognize excellent teaching, to publicize such excellence to the University and the wider community, to encourage the pursuit of excellence in teaching, and to promote informed discussion of teaching and its improvement at the University of Alberta. Nominations are made by Faculties that teach undergraduate students, and information about the nomination procedures and adjudication criteria has been sent to those Faculties. Nominations should be made through a Faculty committee and submitted by the Faculty to the Secretary of GFC UTAC, 2-5 University Hall. Anyone needing assistance and advice in preparing nominations should contact Ms. Margaret Wilson, Acting Director, University Teaching Services, 215 Central Academic Building (492-3208). The deadline for receipt of award nominations is Friday, February 24, 2006 at 4:30 pm. Please note that, in most cases, individual Faculties have established earlier deadlines to allow for internal adjudication procedures. 2-5 University Hall.

Call for Proposals, 2006 Annual Conference of the Canadian Society for Bioengineering
Call for presentations and papers for the 2006 Annual Conference of the Canadian Society for Bioengineering, on July 16-19, 2006, in Edmonton, Alberta. The theme of the conference is "Seeing I to I: Integrity and Integration in Bioengineering." Submit your proposal related to bioengineering in: food and bio-products; agricultural production; machinery systems; soil, water, and air; building systems; animal welfare; information technology; waste management and bio-residuals; renewable

energy and biofuels; emerging technologies and issues. Submit your proposal by March 15, 2006. Fantasyland Hotel and Conference Centre, West Edmonton Mall, Edmonton, AB.

MATHEMATICAL AND STATISTICAL SCIENCES CHAIR SELECTION

The Chair Selection Committee for the Department of Mathematical and Statistical Sciences has been established. Applications, nominations, suggestions, and comments are welcome. These can be submitted to the Committee Chair at the address below.

The Department of Mathematical and Statistical Sciences is currently made up of 61 faculty members, 5 faculty lecturers, 14 support staff and approximately 116 graduate students (MSc and PhD). The Department of Mathematical and Statistical Sciences Department is the largest department of its kind among Canadian Universities. Approximately 50 students graduate annually from BSc Programs with Specialization or Honors in Mathematical and Statistical Sciences. Research activities generate approximately \$3.2 million in funding support. Further information can be obtained from the World Wide Web at <http://www.math.ualberta.ca/index.html>.

Applications, accompanied by a resume, and nominations should be submitted by Friday, December 9, 2005 to Dr. Gregory Taylor, Dean of Science, Faculty of Science, CW223 Biological Sciences or by electronic mail to gregory.taylor@ualberta.ca.

SPANISH LANGUAGE AND CULTURAL STUDIES TRAINING, MEXICO, READING WEEK, 2005

University of Alberta International (UAI) and Grant MacEwan College are organizing a seminar for faculty and academic staff in "Spanish Language and Cultural Studies" in Guadalajara, Mexico. The program is offered in conjunction with our partner, Tec de Monterrey (ITESM).

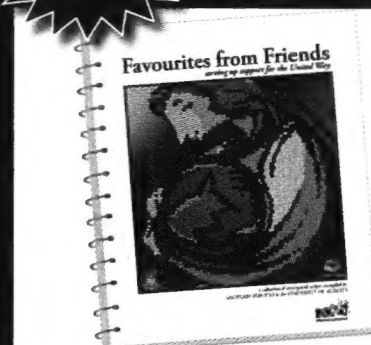
The program will be offered during Reading Week 2005 (Feb. 20-24) and consists of introductory Spanish language training, complemented by lectures on topics ranging from Mexican history, economy, NAFTA, and interesting and diverse cultural activities.

We invite you to attend an information session: Wednesday December 7 at 3:00 pm
Room 236, Telus Centre, University of Alberta campus

For more details, please e-mail Livia Castellanos: livia.castellanos@ualberta.ca or Kathy Higgins: HigginsK@macewan.ca

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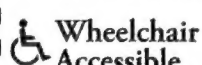
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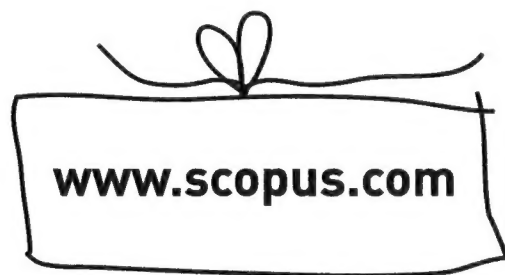
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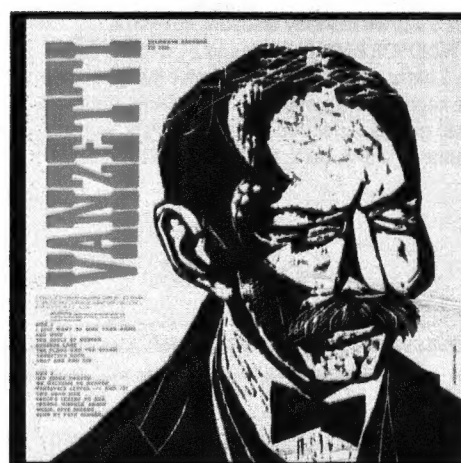
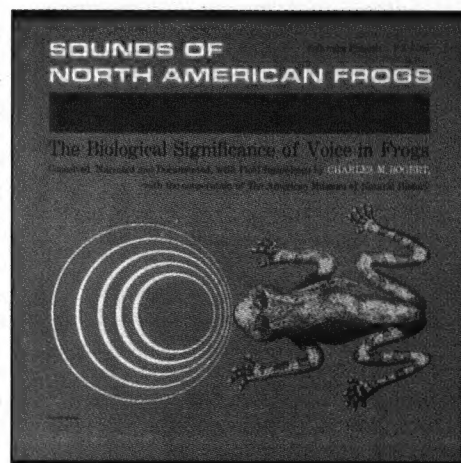
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